# DOCUMENT RESUME

ED 070 790 UD 013 078

AUTHOR Wilder, David E.; Blumner, Alan S.
TITLE Some Sociological Aspects of Student Allocation in Two Racially Mixed Suburban High Schools. Program for Situational Analysis.
INSTITUTION Columbia Univ., New York, N. Y. Dept. of Educational Administration.
PUB DATE 1 Aug 72
NOTE 142p.

EDRS PRICE MF-$0.65 HC-$6.58
DESCRIPTORS *Ability Grouping; Caucasian Students; *Educational Administration; Educational Diagnosis; *High Schools; High School Students; Negro Students; School Integration; School Surveys; *Student Attitudes; Student Grouping; *Suburban Schools; Suburban Youth; Teacher Attitudes; Test Bias

ABSTRACT

This study is an attempt to link sociological theory and research to student grouping procedures, to administrative decision making, and to student attitudes. It is also a modest demonstration of how school administrators might more rationally assess the operation of schools as goal-directed organizations. American schools are based on an age-graded social promotion model with performance levels and curriculum groups differentiated at the secondary level. Standardized psychometric tests of achievement and ability have purportedly been used to screen students rationally for grouping assignments, and thus to promote social mobility through academic achievement. Two metropolitan area suburban high schools, one predominantly black with ability grouping, and the other with a majority of whites and heterogeneous groups within curriculum categories, were studied to determine the relative impact of different grouping procedures on their student clients. School personnel were interviewed, student records were examined longitudinally, and senior class members of each school completed self-administered questionnaires. As expected, grouping assignments within both schools were found to be highly related to social input characteristics of students and to their test scores, and vertical mobility between curriculum groups was minimal. (Authors/JM)

ED 070790

PROGRAM FOR SITUATIONAL ANALYSES

# Some Sociological Aspects of Student Allocation in Two Racially Mixed Suburban High Schools

David E. Wilder and Alan S. Blumner

Biometrics Research, New York State
Department of Mental Hygiene
and
Teachers College, Columbia University

Prepared as a curriculum research document for the Program for Educational Leadership, Julius R. George, Director, and the Program for Situational Analyses, Michael B. Kane, Coordinator.

August 1, 1972

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

UD 013078

## FOREWORD

The Department of Educational Administration at Teachers College, Columbia University initiated the Program for Educational Leadership (PEL) in September, 1968. This three-year doctoral program is designed to develop broadly trained individuals equipped to meet the demands of educational policy leadership in our increasingly complex society. The Program actively recruits outstanding young people who are committed to education as an instrument of social change. The leadership abilities of those selected for the Program are further advanced through training in management, policy analysis, and the social and behavioral sciences.

In order to help integrate and apply the knowledge and methodology of these fields to the problems of the schools, there serves, as a component of PEL, the Program for Situational Analyses (PSA). PSA is an attempt to develop new curricular materials and research techniques for both graduate students and practitioners in educational administration.

This document reports the second of a series of three empirical research studies commissioned by PSA under a grant [#OEG-0-8-081936-4277 (072)] from the United States Office of Education. These "decision studies" apply the theory and methodology of a relevant social or behavioral science discipline to a problem area in educational decision-making. Through the cooperation of a New York Metropolitan area school system the three studies were conducted at the same place and point in time; thus they share a common base.

It is our intent that the reports of the "decision studies" will prove useful as both a model for further research and as a curricular tool for classes in educational administration. They should be especially useful in those courses that focus on the application of the social and behavioral sciences to educational situations. Comments and criticisms are welcomed by the authors and the Program.

Professor Julius R. George has directed the Program for Educational Leadership since the 1970-1971 academic year. During the 1968-1969 and 1969-1970 academic years, Professors Arthur Lewis and James A. Kelly, respectively, were Program Directors.

Members of the Department of Educational Administration who have comprised the PEL policy and planning committee and who have served as advisors to PEL students include Professors Francis A. J. Ianni, Frank L. Smith, Thurston A. Atkins, Michael Usdan and Michael Murphy. Teachers College President John Fischer has also been closely involved with the Program's progress. The Program for Situational Analyses was coordinated initially by Dr. Dale Mann. Since the fall of 1969, Dr. Anthony M. Cresswell and Eugene Paslov have have also served in that capacity.

Michael B. Kane
August 2, 1972

# PREFACE

Social research, like most empirical research, is largely a process of collecting masses of data and then trying to make order emerge from it. Sometimes the model that best fits the data is one that the researcher had in his head before the research began, in which case the model has usually been around for a long time. Other times, the researcher honestly doesn't know exactly what to expect from the data, but he is willing and able to consider alternative hypotheses and to apply any one of a number of available descriptive models and post hoc explanations once findings begin to appear. In the latter case, the norms of research reporting (particularly when there are journal articles to be produced) tend to obscure the fact that the investigator really didn't know exactly what to expect, or expected something somewhat different from what he found. Empirical social research is typically of the latter sort for a number of reasons. Put simply, the social researcher usually studies complex and reactive systems in their natural environments over short periods of time. Hence, when findings emerge, it is frequently difficult to convince readers that a particular explanatory model is the best one.

Because social research is often partly a "search and describe" operation, the success of which hinges on factors that become known only as the study progresses, there is frequently considerable discrepancy between what the social researcher originally proposes and what he is able to produce. One objective of the Program for Educational Leadership has been to train future educational leaders in social and behavioral science. Reports of the studies funded by the Program for Situational Analysis component are intended to be used partly as training materials. It was our feeling that these objectives would best be served if the research report included information that would allow the reader to share some of the uncertainties of the research process and to discover whatever discrepancies there might be between the final monograph and the original proposal. To accomplish this, the original proposal and a research chronicle have been appended to this report as well as copies of the instrument used in the research.

Although a major reason for including the appended materials is to make manifest some of the uncertainties typically encountered in the course of conducting empirical social research, it should not be concluded that either the conceptual-theoretical or the technical-methodological foundations of our research was arbitrary or capricious. The first chapter should make it abundantly clear that the conceptual-theoretical framework for viewing student allocation by others was developed many years ago and has only been embellished or elaborated since. Similarly, the approach to data collection and analysis used in this study is essentially illustrative of the type of survey research methodology developed by American sociologists over the past forty years. [1] The uncertainties connected with the research were encountered (1) in discovering whether the schools maintained records that would provide sufficient data to fit our conceptual and analytic models, and (2) in predicting the specific findings revealed by the analysis.

The fact that the Program for Situational Analyses was based part on a conceptual framework derived from general systems theory presented some minor problems in writing the report that follows. Introducing systems analysis to sociologists is somewhat akin to telling them they have been speaking prose all their lives, but using some of the wrong words. Sociologists have clearly been using systems concepts for a long time, and anyone familiar with systems terms would have no difficulty in translating any of the sociological studies of American education to which we refer into general systems language. We have not performed this translation for two major reasons. First, because such a translation would create an additional linguistic barrier between education and sociology at a time when many sociological terms are already familiar to educators. Second, because as far as we have been able to determine, general systems terms would make no unique contribution to the theoretical-conceptual matters we have considered. That is to say, in Kuhn's terms, we do not provide a sufficiently unique paradigm to warrant their adoption [2]---particularly when their use would tend to reinforce the social distance that already separates educators and sociologists. Thus with the exception of the occasional use of the word "throughput", general systems terms that occur in the text are merely illustrative of the extent to which these terms are endemic to sociology.

---

[1] See, for example, Herbert H Hyman, Survey Design and Analysis, The Free Press, Glencoe, 1955.

[2] Thomas Kuhn, The Structure of Scientific Revolutions, University of Chicago Press, Chicago, 1970.

Whenever there are multiple authors, and particularly when alphabetical order is not followed, one is tempted to speculate about the division of labor that produced the publication. In this case, the division varied from one chapter to the next. I wrote the original proposal one evening in August, 1969, before leaving on a short trip to California. I also wrote the first chapter, seeing it as an opportunity to finally organize some of my accumulated thoughts about student allocation. Alan Blumner wrote Chapters II and III as a first try at analyzing some of the materials that will go into his dissertation. He also wrote Appendices A and B. Chapter IV was mostly my responsibility.

A number of people, many of whom must remain nameless, contributed to the success of our study. First of all, we are indebted to the Directors of the Program for Situational Analysis for funding the study and for exercising self-restraint in awaiting this volume. As researchers, our contact was mainly with the Coordinator of PEL. This was Dale Mann when our grant was awarded, but he was succeeded in turn by Anthony M. Cresswell, Michael B. Kane, and Eugene T. Paslov. The high quality of these four young men served as ample testimony to the high standards of PEL. As the study progressed, Susan Kosoff performed heroically as our coding supervisor. Carole Steinbock and Barbara Blumner joined us for interviews with school personnel and worried with us over the meaning of responses obtained. Elizabeth Sanchez and John Skinner were especially helpful during administration of the student questionnaire, and Joseph Lopatien and the staff at Calculogic Corporation helped prepare the data for analysis. Our special thanks go to the Superintendent of Schools in Transurbia and to the many members of his staff who gave us their cooperation, and to Judith Poehler who typed the manuscript and eliminated many of its errors. Finally, we should like to thank Joseph Zubin, Chief of Biometrics Research, New York State Department of Mental Hygiene, for his continued support and encouragement.

David E. Wilder
September 1, 1971

# TABLE OF CONTENTS

| | | Page |
|---|---|---|
| Foreword | | ii |
| Preface | | iv |
| List of Tables | | vii |
| Abstract | | viii |
| Chapter I | Some Sociological Musings About Student Allocation in Public Schools | 1 |
| Chapter II | The Transurbia Student Allocation System | 24 |
| | Group Classification at the Two Schools | 27 |
| | Background Characteristics of Students | 32 |
| | System-Related Characteristics of Groups | 41 |
| | Vertical Mobility in English Group Assignments | 45 |
| | Some Reflections | 49 |
| Chapter III | Student Grouping and Decision-Making | 51 |
| Chapter IV | Some Correlates and Consequences of Allocation Decisions: Linking Students' Attitudes to School Records Data | 60 |
| | How the Students View the School and Education | 62 |
| | Academic Performance, Self-Image and Aspiration | 66 |
| Bibliography | | 88 |
| Appendices | | 93 |

## LIST OF TABLES

| Number | | Page |
|---|---|---|
| I. | High School Attended by Race, Class of 1970 | 25 |
| II. | High School Attended by Median Scores on Selected Standardized Tests | 26 |
| III. | Proportion of Students Enrolled in the Three Curricula, Grades 10-12 | 28 |
| IV. | Proportion of Students in English Grouping Categories, Grades 10-12 | 31 |
| V. | Percent White Collar Fathers According to English Groups, Grades 10-12 | 33 |
| VI. | Percent from Homes with Both Parents Present According to English Groups, Grades 10-12 | 35 |
| VII. | Length of Residence in Transurbia According to 12th Grade English Groups | 37 |
| VIII. | Percent Males According to English Groups, Grades 10-12 | 38 |
| IX. | Percent Blacks According to English Groups, Grades 10-12 | 39 |
| X. | Mean Scores on I.Q., Language Aptitude, and Reading Tests According to English Groups, Grades 10-12 | 42 |
| XI. | Percent High Grades According to English Group, Grades 10-12 | 44 |
| XII. | Mean Absences and Percent Increase in Absence For 10th Grade English Groups | 46 |
| XIII. | Vertical Mobility in English Group Assignments | 48 |
| XIV. | Selected Characteristics of Senior Classes in Two Sample Schools for Years 1965, 1969, and 1970 | 67 |

# ABSTRACT

This study is an attempt to link sociological theory and research to student grouping procedures, to administrative decision making and to student attitudes. It is also a modest demonstration of how school administrators might more rationally assess the operation of schools as goal-directed organizations.

American schools are based on an age-graded social promotion model with performance levels and curriculum groups differentiated at the secondary level. Standardized psychometric tests of achievement and ability have purportedly been used to screen students rationally for grouping assignments and thus to promote social mobility through academic achievement. However, sociological studies have consistently shown that schools tend to be conservative institutions that reinforce social inequalities found in their external environments. These factors have traditionally been viewed as beyond the responsibility or control of the school, but recently compensatory programs have been designed to offset educational problems of disadvantaged groups. Meanwhile, little is known about the relative impact of different grouping procedures on their student clients.

Two metropolitan area suburban high schools, one predominantly black with ability grouping, and one with a majority of whites and heterogeneous groups within curriculum categories, were studied. School personnel were interviewed, student records were examined longitudinally, and senior class members of each school completed self-administered questionnaires. As expected, grouping assignments within both schools were found to be highly related to social input characteristics of students and to their test scores, and vertical mobility between curriculum groups was minimal. Administrators were viewed as playing an essentially reactive political role.

Students in both schools were found to be rather conservative in their attitudes toward education. But assessments of the relative merits of their schools and perceptions of their racial situations varied considerably between schools, between curriculum and ability groups, and between races. Examination of self-image and educational expectations of students in relation to their academic careers and group placements indicated that whites continued to respond to traditional definitions of school rewards, but blacks did not, and that school administrators with racially mixed clientele face special problems in grouping, evaluating and rewarding students.

# CHAPTER I

## Some Sociological Musings About Student Allocation in Public Schools

> It is true, we shall tell our people in this fable, that all of you in this land are brothers; but the god who fashioned you mixed gold in the composition of those among you who are fit to rule, so that they are of the most precious quality; and he put silver in the auxiliaries, and iron and brass in the farmers and craftsmen. Now, since you are all of one stock, although your children will generally be like their parents, sometimes a golden parent may have a silver child or a silver parent, a golden one, and so on with all the other possible combinations. So the first and chief injunction laid by heaven upon the Rulers is that, among all the things of which they must show themselves good guardians, there is none that needs to be so carefully watched as a mixture of metals in the soul of the children. If a child of their own is born with an alloy of iron or brass, they must, without the smallest pity, assign him the station proper to his nature and thrust him out among the craftsmen or the farmers. If, on the contrary, these classes produce a child with gold or silver in his composition, they will promote him according to his value, to be a Guardian or an Auxiliary. They will appeal to a prophecy that ruin will come upon the state when it passes into the keeping of a man of iron or brass. Such is the story; can you think of any device to make them believe it?
>
> Not in the first generation; but their sons and descendants might believe it, and finally the rest of mankind.[1]

The history and development of public education in the United States can be viewed from many perspectives. When international comparisons are made, our system appears uniquely successful in combining universal free public education through twelfth grade with mass higher education for nearly half of its youth. Yet the same system has frequently been cited by sociologists as one that denied opportunity to some social groups while claiming to provide equality of educational opportunity to all. That both of these generalizations are essentially true should come as no surprise to those sufficiently familiar with our educational system. But before turning to our empirical study, we would like to review some major aspects of sociological thinking and of research on selection and allocation in education, and to juxtapose these conceptualizations and findings with actual educational practices which have remained largely uninfluenced by them until recent years. We realize that some of the content of this chapter may seem remote from our empirical study, but it has been written in the hope that it might serve to reduce the social distance between educators and sociologists.

---

[1] Plato, The Republic. Translated by Francis MacDonald Cornford. New York: Oxford University Press, 1945, pp. 106-7.

American sociology undoubtedly owes a greater intellectual debt to Emile Durkheim and to Max Weber than to any other men. Both wrote extensively on education, but these writings have remained largely uninfluential until recent years.[2] Yet much of what we will have to say represents an elaboration of Durkheim's and Weber's early observations about education in other societies.

Durkheim's chief sociological concern was with the integration of institutions in society, and he stressed these integrative, and hence conservative, functions of education in his lectures and writing. His definition of education is essentially one of socialization in stable societies:

> Education is the influence exercised by adult generations on those who are not yet ready for social life. Its object is to arouse and to develop in the child a certain number of physical, intellectual, and moral states which are demanded of him by both the political society as a whole and the special milieu for which he is specifically destined.[3]

---

[2] A comprehensive history of the development of "educational sociology" and the emergence of a "sociology of education" has yet to be written. Until it is, Brookover's opening section remains the best introduction. Wilbur Brookover and David Gottlieb, A Sociology of Education, second edition, The American Book Company, New York, 1964.

[3] Emile Durkheim, Education and Sociology. Translated by Sherwood D. Fox. New York: The Free Press, 1956, p. 71. Significantly, this was the last of Durkheim's major works to be translated into English.

Weber, in contrast, was chiefly concerned with the impact of rationalism on various institutional spheres. In education this meant a selection-allocation system developed along rational bureaucratic lines; and Weber's historical scholarship led him to present Confucian education as the prototypical model, with its universalistic examinations that certified candidates for higher positions in Chinese society. [4]

Together, then, the essentials of a classical sociological perspective on education are concerned with the selection-allocation process as it relates to positions in the external society, and socialization of those processed to accept the norms and values appropriate to the positions they will eventually occupy.

## SOME HISTORICAL CONSIDERATIONS

As many have noted, the first critical test of universal public education in the United States occurred in the early twentieth century when child labor laws and compulsory school attendance laws emerged with the result that the vast majority of youth remained in school into the high school years. Until that time the secondary schools of our nation were reserved for a small proportion of the population. Prior to these laws the vast majority of high school students ended up in white collar occupations, and about half of the graduates went on to college. The selection-allocation system was intentionally elitist, and it was legitimized by an ideology that was as much Horatio Alger as Charles Darwin or Thomas Jefferson. That is, the public school was there for those who were able to perform up to its standards and wanted to remain. It was a rational-competetive system where failure meant remaining behind to repeat or leaving school. Not surprisingly, the majority often chose to leave. Since compulsory attendance laws would require all failing students to remain until they reached specified ages,this presented the very real possibility that the majority of students in lower grades would be "repeaters." Dewey is customarily acknowledged for having anticipated this problem, [5] pointing out the inappropriateness of both the traditional academic curriculum and the failure norms for the majority of those who attend school. The schools tended to respond by adding different curricula for the non-college bound secondary students, and separate schools were frequently created to offer these new terminal curricula exclusively. Hence the secondary school solution to the problem of universal education was in keeping with an individualistic-competitive democratic value orientation, and it was to be based on performance criteria. The multiple curricula plan for secondary schools was not, however, a satisfactory solution to the "repeater" problem in the early grades.

---

[4] See especially, From Max Weber: Essays in Sociology. Translated by H. H. Gerth and C. Wright Mills. New York: Oxford University Press, 1958, pp. 240-5, and 426-33

[5] See, for example, Lawrence A. Cremin, The Transformation of the School: Progressivism in American Education, 1876-1957. New York: Alfred Knopf, 1961. Also John Dewey, Democracy and Education, New York: MacMillan, 1 1616.

Contemporaneous with the crisis of universal secondary education was the fortuitous emergence of psychometric tests developed by Binet and his American counterparts. These promised to provide universalistic standards to aid in the sifting and sorting of students in a manner that would be both rational and democratic. It was well known that teachers frequently found it difficult to objectively judge the performance of some of their students, and the new standardized tests promised to provide a remarkable solution.

In 1916, the National Society for the Study of Education published in its Fifteenth Yearbook, Part I, Standards and Tests for the Measurement of the Efficiency of Schools and School Systems.[6] This volume illustrated how standardized tests might be used by elementary schools and signalled the virtually universal adoption of such tests by public schools during the following years. It also contained early recognition of some problems that the use of standardized tests would produce and some administrative solutions to these problems. Perhaps most important among these problems was the wide range of age and performance among students in the same classrooms. J. B. Sears, for example, found in Oakland that "Every grade contained children at least eight years apart in ages, and a careful study showed that the accelerates invariably scored higher than their grade averages, while the retardates regularly fell below...."[7] In the interests of economic efficiency, Daniel Starch proposed "classifying and promoting pupils, not according to time, but according to ability."[8] since it was clear that "One pupil out of every three is promoted too rapidly."[9] In short, the problem was that standardized tests showed a wide range in levels of performance among students of similar age. A strict performance test for promotion in elementary schools would result in the virtual elimination of age grade distinctions, and this was deemed socially undesirable by most educational reformers of the time. Guy M. Whipple, Editor of the Yearbook, set forth a solution to this problem for elementary schools in the final chapter:

---

[6] Guy M. Whipple, ed. The Fifteenth Yearbook of the National Society for the Study of Education, Part I, Standards and Tests for the Measurement of the Efficiency of Schools and School Systems. Chicago: The University of Chicago Press, 1916.

[7] Whipple, ed. The Fifteenth Yearbook of the National Society for the Study of Education, Part I. p. 141.

> The foregoing citations... are adduced here as being enough to demonstrate that the Binet-Simon tests can be used to distinct advantage in the classification and grading of school children from the very first day of their work in the schools. It goes without saying that the use of the tests in this manner presupposes the actual organization within the school system of sections or groups of pupils classified in accordance with the tests... every bit of evidence endorses a plan of organization which embodies more than two sections of groups within each of the usual school grades. Eventually, we shall undoubtedly seek to develop in all school systems at least four groups: the gifted group, the regular group, the slow group, and the group of moderately defective mentality. A fifth group--the mental defectives whose insufficiency is marked--will be relegated to special custodial institutions. This plan of organization will be recognized as essentially the one widely and favorably known as the Sickinger, or Mannheim, system, now in operation in Germany.[10]

---

[8] Ibid., p. 143

[9] Ibid., p. 143

[10] Whipple, ed., The Fifteenth Yearbook of the National Society for the Study of Education, Part I, pp. 153-4

Thus the elementary school solution was to maintain age grade distinction by combining "social promotion" with ability or performance level grouping within age groups. This combination should have provided both a rational and an efficient selection-allocation system when also combined with differentiated curricula at the secondary school level. But somehow this did not occur. Of course, some schools and their systems never fully implemented this type of selection-allocation system, although virtually all made extensive use of standardized tests. However, the type of selection-allocation that evolved in most schools was doomed to fail eventually because it could never provide sufficient rates of mobility to disadvantaged groups as a result of the individualistic premises on which it was based. That is to say, its designers and proponents failed to acknowledge the socialization function of education, that the people whom it was designed to serve and those who were expected to implement it would not conform to the universalistic-individualistic norms on which it depended. In short, people would not accept the educational psychologists' myth of metals or the results of their metallurgic tests.

Curiously, the basis for an eventual fall from grace of the psychological model, and the emergence of a more sociological orientation can be found in the same Fifteenth Yearbook of the NSSE, Part II, The Relationship Between Persistence in School and Home Conditions, by Charles Elmer Holley.[11] To illustrate, we will again quote Guy M. Whipple, this time from his Preface to Part II of the same Yearbook:

> In this part of the Fifteenth Yearbook, Dr. C. E. Holley presents the results of a direct investigation. . . of the important question: What factors determine the number of years of schooling received by pupils of the public schools? . . . the results are doubtless typical for the Middle West, if not for the country generally. . . A close

---

[11] Charles Elmer Holley, The Fifteenth Yearbook of the National Society for the Study of Education, Part II, The Relationship Between Persistence in School and Home Conditions. Chicago: University of Chicago Press, 1916.

> correlation is discovered between years of schooling and the economic, social, and educational advantages of the homes from which the pupils come, and these environmental conditions appear to be more important than degree of native ability in determining amount of schooling. Retardation and truancy are most frequent among the children of poor and uneducated parents...Of particular interest to schoolmen is the demonstration that early elimination is largely due to external factors over which the school has little or no control. [12] (emphasis ours)

Thus, evidence that an individualistic, rational selection-allocation system would not succeed for large segments of the population was immediately dismissed because the evidence was based on "external factors over which the school has little or no control." The rational-individual universalistic model was also a voluntaristic one; that is, if one did not choose to do well or choose to remain in school, even though endowed with high native ability, that was his right. (Provided, of course, that he had passed the age of "compulsory" attendance!).

An additional factor that influenced the forms in which student allocation systems evolved in American schools was the predominance of a business orientation among school administrators, particularly the emphasis on rational efficiency as an instrumental goal for organizations. David Snedden, the early education sociologist who probably had the most influence on school administrators, put forth the efficiency norm as a major reason for advocating the type of student allocation system he favored. [13] Snedden was a strong advocate of separate vocational schools who maintained that school personnel should include the socio-economic origins of students as a major factor in assigning them to educational groups and programs. He asserted that even the especially bright students from disadvantaged homes should not be encouraged to take college preparatory courses since their "ultimate probable destiny" was to remain at occupational levels similar to those of their parents. Hence it would be inefficient for schools to waste valuable resources preparing them for college.

---

[12] Guy M. Whipple, Preface to The Fifteenth Yearbook of the National Society for the Study of Education, Part II.

[13] Snedden was a school administrator in California who taught at Stanford and came East to Teachers College where he wrote his doctoral thesis on the superiority of education practiced in reform schools over that found in the regular public schools. He became Commissioner of Education for Massachusetts after completing his doctorate and returned to Teachers College after a few years where he remained a professor until retiring. For a fascinating account of his career see Walter H. Drost, David Snedden and Education for Social Efficiency. The University of Wisconsin Press, Madison, 1967.

As Curti has documented so well, the social ideas of influential American educators have had a distinct tendency toward conservatism.[14] There have been notable exceptions, such as Dewey and Counts, but most leading educators were strong advocates of individualism and free enterprise who supported our major social institutions in their current forms. Academic behavioral scientists were no general exception to this rule. Thus while Snedden was far more accepted among educators than among sociologists, his social ideas were not uniquely conservative among sociologists of his time. However, his work was seldom acknowledged and was not influential among sociologists, but a "study published by the NEA in 1923 listed three of Snedden's books among those found most useful by sixteen curriculum specialists and nine city superintendents polled."[15] In contrast, the most prominent American sociologists largely ignored educators, who, in turn, ignored the sociologists. Until recent years, American sociologists seldom studied mass education except as an adjunct to other substantive concerns.

## SOCIOLOGICAL STUDIES

The sociological studies of American communities represent a notable exception to this general rule.[16] Authors of the community studies were forced to present a somewhat coherent view of the role of local schools, and from these studies there emerged a remarkably consistent series of generalizations. The major thrust of the community studies was to document the fact that our democracy, where everyone is created equal, is located in a highly stratified society where life chances are to a large extent determined by position of parents. Despite differences in the specific number of strata or layers identified and local historical peculiarities, community researchers essentially agreed in their descriptions of education as reinforcing and articulating the external stratification structure of the community through selection-allocation and socialization.[17]

---

[14] Merle Curti, The Social Ideas of American Educators, Littlefield, Adams & Co., Totowa, 1966.

[15] Quoted from W.H. Drost op. cit. p. 192, The NEA study is "Vote of Most Helpful Books Dealing with High School Curriculum Problems," NEA Research Bulletin, I, No. 5 (1923).

In their classic study of Middletown in 1924-25, the Lynds devoted special attention to school dropouts.[18] They found that although working class parents valued education and saw it as a means of salvation, they were less likely to instill a desire for higher education in their children. Moreover, their children were penalized within the schools for not possessing the "symbols, attitudes, and behavior characteristics valued by the dominant class group." The important series of studies by Warner and his associates demonstrated how the educational structure perpetuates inequalities and provides relatively little mobility.[19] In addition, middle class educators were seen as playing a vital role in helping to keep lower class students from achieving higher positions.

---

[16] Willard Waller was perhaps the most notable exception to this rule. His The Sociology of Teaching, New York, Wiley, 1934 is a classic treatment that is unique for its time. It is interesting to note that Waller taught at Barnard until his early death, but he never crossed the street to teach at Teachers College, another affiliate of Columbia University.

[17] For a more comprehensive review of these community studies see Wilbur B. Brookover and David Gottlieb, op. cit. pp. 159-64.

[18] Robert S. Lynd and Helen M. Lynd, Middletown: A Study in American Culture. New York: Harcourt Brace, 1929.

> One large group is almost immediately brushed off into a bin labelled "non-readers," "first-grade repeaters," or "opportunity class," where they stay for eight or ten years and are then released through a chute to the outside world to become "hewers of wood and drawers of water."[20]

Perhaps most relevant for our purposes are the findings of Warner, Havighurst and Loeb that "In high schools there is a relationship between the student's socio-economic status and the curriculum in which he is enrolled, and, when intelligence is constant, the proportion of high school graduates that go on to college decreases with socio-economic status" and that "The type of curriculum determines, in part, the quality of education, for teachers and administrators assign less prestige to vocational training programs than to college-oriented courses.[21]

To summarize, the American community studies demonstrated how American mass education played an essentially conservative role. It was not conspicuously successful in getting the lower socio-economic groups to be content with lower positions in the society, but it succeeded in maintaining both lower performance levels and a desire to leave school early among the economically disadvantaged so that mobility was not accomplished easily through educational means. In addition the schools adopted an internal stratification system of ability and curriculum groups that mirrored and reinforced distinctions found in the external society. Schools played this conservative role in the midst of a society that maintained an "openness" myth, claiming that anyone who worked hard could succeed; but as success in life became more closely associated with amount of schooling completed, students relegated to lower ability groups were defined as failures while required by law to remain members of the system. Not surprisingly, participants in the system, whether faculty or students, resisted being associated with lower ability and curriculum groups and the stigma attached to them.

---

[19] See especially W. Lloyd Warner and Paul S. Lunt, The Social Life of an American Community. New Haven: Yale University Press, 1941; Allison David, Burleigh B. Gardner and Mary R. Gardner, Deep South. Chicago: University of Chicago Press, 1941; W. Lloyd Warner and Wilfred C. Bailey, Democracy in Jonesville. New York: Harper, 1949, and W. Lloyd Warner, Robert J. Havighurst and Martin B. Loeb, Who Shall Be Educated? New York: Harper, 1944.

[20] Warner, Havighurst and Loeb, Who Shall Be Educated?, p. xi.

[21] Warner, Havighurst and Loeb, as summarized by Brookover and Gottlieb, A Sociology of Education, p. 163.

During the 1950's a number of national manpower studies pointed out the inefficiency of our sorting system and demonstrated that while average ability test scores of groups completing different levels of education were higher for each higher level of attainment, only very small fractions of those with the highest ability completed the highest levels of education and many with high attainment had only average test scores.[22] Soon sociologists began to take more interest in studying education directly. Perhaps the major outgrowth of these studies was the demonstration of how social factors in various contexts tended to intervene or modify educational process and levels of attainment. For example, Coleman, in his study of Illinois high schools, showed that in schools where student values stressed non-academic activities, students with the highest ability were not those attaining the highest grades.[23] Rogoff demonstrated in a national study that while I.Q. and socio-economic origin of students combined as strong predictors of which students would attend and complete college, type of community of origin was also an important factor, with students from suburbs having a distinct advantage.[24] In a similar vein, Wilson presented findings showing how the predominant socio-economic ethos in high schools tended to raise the aspiration levels of working class students in middle class schools and to lower those of middle class students in working class schools.[25] In short, by the 1950's, sociologists were accumulating considerable evidence that an individualistic selection-allocation system was subject to a number of nonrational social factors that hampered its efficiency significantly and especially lowered potential rates of social mobility on a national basis. That is, students with high academic potential from lower socio-economic origins tended to complete less school than students with lower ability from higher socio-economic origins. Generally, levels of completion had become much higher for all groups than they were in the early 1900's but "non-school" factors continued to play the important roles they had when Holley reported in 1916.

---

[22] Dael Wolfle, American Resources of Specialized Talent, New York: Harper and Brothers, 1954, was probably the most influential of these studies. It is interesting to note that while Snedden (Drost, op. cit. ) had earlier maintained that it was "inefficient to encourage the poor to take college preparatory courses, Wolfle later argued that it was "inefficient" not to send all the brightest to college.

[23] James S. Coleman, The Adolescent Society. Glencoe: The Free Press, 1961.

Additional clues as to why a rational individualistic sorting system did not work as efficiently as early proponents had hoped were provided by Cicourel and Kitsuse in their case study of the guidance program in an Illinois high school.[26] While tests of ability and achievement were regularly administered in the school they studied, other factors were frequently taken into consideration in placing students into curriculum and ability groups. Chief among these was the social origins of students, with guidance counselors assigning students to groups consistent with their social origins and responding to pressures from middle class parents to place their children in college preparatory sections despite low test scores. Testing results were used when it was convenient, but this information could be overruled or ignored in many cases. Thus the apparent bureaucratic-democratic prescriptions for the student allocation function in the guidance office was frequently cancelled by the particularistic informal norms with which the system actually operated.

---

[24] Natalie Rogoff, "Local Social Structure and Educational Selection" in A. H. Halsey, Jean Flound, and C. Arnold Anderson, eds., Education, Economy and Society. New York: The Free Press, 1961, pp. 241-51.

[25] Alan B. Wilson, "Residential Segregation of Social Classes and Aspirations of High School Boys," American Sociological Review, 24, 1959, pp. 836-45

[26] Aaron V. Cicourel and John I. Kitsuse, The Educational Decision-Makers. New York: Bobbs-Merrill, 1963.

In a study conducted in eight New Jersey school systems in the 1960's, Wilder et al. pointed out how the ecology of school sending districts placed the parents of working class students at a disadvantage in attempting to assess the academic potential of their children.[27] Elementary schools tended to have far more homogeneous populations socio-economically than the secondary schools into which they fed, and elementary schools usually assigned letter grades or other rewards on a within-school relative basis. Working class mothers were frequently dismayed to find their children receiving lower grades in secondary school; and their children were often assigned to lower ability groups or non-college preparatory groups. The comparative reference groups for parents in assessing the performance of their children tended to be class bound, and as a result, working class parents failed to discover they had not set their standards high enough until it was virtually too late.

Clearly parents would not have been limited to class bound comparisons if results of standardized tests had been made available to them and adequately interpreted as a matter of routine. However, despite the virtually universal use of standardized tests by the schools, testing results were usually treated as privileged information that was jealously guarded by the schools. Test results for individual children were frequently revealed to their parents at teacher or counselor conferences -- particularly when these tended to show the school and child in a good light -- and suburban school administrators were even known to reveal that average scores of the local students were well above grade level. But usually no one made a point of the fact that for this to be true there also must be schools somewhere with students whose average scores were well below grade level. Nor could teachers in working class schools be faulted for failing to reveal low standardized test scores in parent conferences, and administrators in these schools could not be expected to reveal low average levels of performance. Indeed, school administrators have long displayed a fear that they might be judged by the performance levels of the students in their schools, and testing organizations have honored the confidentiality of group results as a matter of ethics. For example, Project Talent had to guarantee that no comparisons would be made for identifiable units smaller than regions in its 1960 national study,[28] and the more recent National Assessment has met with a strong resistance from school administrators despite a tortuous research design that makes comparisons of schools and communities virtually impossible.[29]

---

[27] David E. Wilder, Nathalie S. Friedman, Robert B. Hill, Eva Sandis, and Sam D. Sieber, Actual and Perceived Consensus on Educational Goals Between School and Community. Bureau of Applied Social Research, Columbia University, 2 vols., 1968.

It was not until the 1960's that it became common knowledge that the average performance levels of students in one school might be several grades above the average performance of students the same age in another school in the same system, and that these differences could be predicted from the social inputs to the schools. Barton and Wilder documented the strong relationship between social class and reading retardation on a national basis in their 1961 survey of elementary school teachers,[30] but the political impact of such findings was virtually zero until they became linked with racial issues in the later 1960's.

---

[28] J. C. Flanagan, et al., The American High School Student, Pittsburgh: Project Talent Office, 1964.

[29] See, for example, Martin T. Katzman and Ronald S. Rosen, "The Science and Politics of National Educational Assessment," The Record, Teachers College, Vol. 71., No 4. (May, 1970), pp. 571-86.

## THE IMPACT OF RACIAL CONSIDERATIONS

When the Supreme Court decision of 1954 fell upon the schools, many administrators were heard to complain that it would be difficult to integrate the schools educationally because of vast differences in performance levels between black and white students. Whether one was a racist or a radical environmental determinist, it was easy to see that such a problem might exist, but the number of superintendents forced to find a large scale solution to the problem was relatively small during the immediately following years. One notable exception was Washington, D. C., where there existed two roughly equivalent sized school systems, one white and one black, and where the schools were told they must actually merge as one system. Carl Hansen was hired by the Washington schools as Superintendent partly because he had a selection-allocation system designed to cope with this problem. His was a four-track system of ability grouping, and upon examination it proves to be almost identical to the system that Whipple suggested the schools adopt from the Germans in 1916! During his period of local success, Hansen published a book demonstrating how successful his tracking system was,[31] but soon the schools became almost all black, and blacks claimed that his tracking system discriminated against them. Indeed it was soon shown that black students were disproportionately limited to lower tracks, and tracking was officially discontinued after Teachers College completed its study of the Washington system.[32]

---

[30] Allen H. Barton and David E. Wilder, "Research and Practice in the Teaching of Reading: A Progress Report," in Matthew B. Miles, ed., Innovation in Education. New York: Teachers College Press, 1964, pp. 361-98.

[31] Carl F. Hansen, The Four-Track Curriculum in Today's High Schools. Englewood Cliffs, New Jersey: Prentice-Hall, 1964.

[32] A. Harry Passow, Toward Creating a Model Urban School System: A Study of the Washington, D. C. Public Schools. New York: Teachers College Press, 1967.

Undoubtedly the single most influential study during the 1960's was the Coleman Report with its controversial finding that black students performed better academically in racially integrated schools.[33] This gave fresh impetus to efforts toward integration even as black nationalist groups were openly urging separatism. However, the Coleman Report also provided undeniable fresh evidence of the wide difference in academic performance levels between different socio-economic groups throughout the nation regardless of race.

One reason why repeated evidence of wide disparities in performance levels of different social groups has had limited impact over the years is because it has usually been met by the argument that lower levels of performance should be expected from certain groups because they are generally less intelligent. By less intelligent, one usually means the lower scores on intelligence tests that are made by members of these groups; and thus the psychometric tradition has provided a convenient companion explanation for the unpleasant situation that disclosure of group achievement scores invariably creates. But while achievement tests are generally admitted as valid evidence of performance levels in specific academic areas, intelligence tests have been accused of bias against low socio-economic and minority ethnic groups ever since Davis wrote his classic in 1948.[34] In recent years New York City and many other communities have officially discontinued the use of intelligence tests because of the feelings shared by many that these tests especially discriminate against lower socio-economic blacks and could be used as the basis for preventing the entry of blacks into high ability or more academic school groups and programs.

---

[33] James S. Coleman, et al., Equality of Educational Opportunity, U.S. Department of Health, Education and Welfare, 1966.

[34] Allison Davis, Social-Class Influences on Learning. Cambridge Mass.: Harvard University Press, 1948. For a review of some of these issues see W.W. Charters, Jr., "Social Class and Intelligence Tests," in W.W. Charters, Jr., and N.L. Gage, eds., Readings in the Social Psychology of Education. Boston: Allyn and Bacon, 1963, pp. 12-21.

From the standpoint of our admittedly sketchy narrative , the most significant educational development of the 1960's was the notion of compensatory education. Whereas Whipple could dismiss Holley's findings in 1916 because they were "largely due to external factors over which the school has little or no control,"[35] by the 1960's educational reformers were claiming that it was the responsibility of the schools to offset any academic disadvantages that children brought to school because of their social origins. If one gave special interpretation to some of the work of psychologists such as Bloom,[36] compensatory programs that took children who had already reached the age of three years and worked with them just part of the day were doomed to fail from the outset; but the new social consciousness demanded that the schools do something to offset inequalities that were social in origin. Compensatory programs such as Operation Headstart were the result. It is interesting that Hensen used to claim that Operation Headstart and other compensatory programs had failed, and that he had the explanation for this failure, as his rationale for writing his controversial 1969 article for the Harvard Educational Review.[37] In addition to heralding a new wave of psychometric racism, Jensen was clearly suggesting that lower performance levels among blacks were due to nature rather than to nurture, and that they were again safely beyond the control or responsibility of the school.

Aside from the brief mentions of Hansen in Washington, of adoption of a business orientation by school administrators and of resistance of administrators to disclosing test scores of identifiable groups, school superintendents have been noticeably absent from our discussion to this point. This has been both deliberate and a reflection of the actual role superintendents have usually played in selection-allocation decisions. By now the political nature of the position of school superintendent is frequently stressed to the exclusion of more traditionally recognized educational leadership functions. But racial and social class considerations have long dominated school districting and *inter*-school selection-allocation decision making, and these issues have always been deeply imbedded in the political sphere. However, *intra*-school selection allocation, or grouping for instruction, has only recently become an open political issue with racial overtones. Thus one might well ask why haven't superintendents been more conspicuous in demonstrating educational leadership and innovativeness in developing systems of grouping for instruction in the past? On the surface, it appears that there were a number of important structural constraints that mediated against superintendents playing such a role. First of all, public schools were characteristically dominated by the college-oriented members of the community, the college curriculum was largely set by Carnegie units, and individual students were assessed as part of a national testing program. Moreover, the most influential study of secondary schools during the past fifty years was essentially a conservative force in recommending relatively large schools with a comprehensive program offering both college preparatory and terminal education.[38] In addition, while there was a vast literature on the subject, and many studies of grouping had been conducted, educational research was nowhere near as unanimous and unambiguous in its conclusions as Whipple had maintained in 1916.[39] In fact, it had become painfully obvious during the succeeding half century that grouping for instruction was extremely difficult as a subject for research. Even in the careful work of Goldberg, Passow, and Justman, one can detect a sense of tentativeness and careful qualification of limited findings.[40] As a result, any innovations in grouping procedures had to be defended on some basis other than research evidence. But perhaps most important, the superintendency has evolved over the years as an essentially reactive political role, rather than an initiating political role. Superintendents are understandably hesitant to propose changes where none are being demanded by members of the local community. That would be looking for trouble.

---

[35] Whipple, Fifteenth Yearbook of the National Society for the Study of Education, Part I. For a somewhat different, but complementary view of the developments we have discussed see Theodore R. Sizer, "Testing: Americans' Comfortable Panacea." Proceedings of the 1970 Invitational Conference on Testing Problems, Educational Testing Service Princeton, New Jersey, 1971.

[36] Benjamin S. Bloom, J. T. Hastings, and C. F. Madaus, Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw-Hill, 1971.

[37] Arthur R. Jensen, "How Much Can We Boost I. Q. and Scholastic Achievement?," Harvard Educational Review, 29, No. 1 (Winter, 1969), pp. 1-123 .

---

[38] James B. Conant, *The American High School Today.* New York: McGraw-Hill, 1959. Also, J. B. Conant, *The Comprehensive High School.* New York: McGraw-Hall Paperbacks, 1967.

[39] Indeed, even Whipple had some second thoughts as early as 1936. See Guy M. Whipple, ed., *The Thirty-Fifth Yearbook of the National Society for the Study of Education, Part I, The Grouping of Pupils.* Bloomington, Ind.: Public School Publishing Company, 1936.

No doubt to the continued dismay of Marxists, working-class membership has never served as sufficient basis for effective political action in our society. Continuing evidence that children from lower socio-economic homes did poorly in school or were frequently defined as low achievers and denied access to favored groups could never activate significant political forces. However, evidence that Jews, Italians or Irish were not being treated fairly by the selection-allocation system of the schools would clearly have tremendous political repercussions in any metropolitan area in the country. Thus when an essentially racially segregated national system of education was viewed from the perspective of standardized test scores and college attendance in the 1960's, there was no way to conceal the fact that blacks were disproportionately denied success. Not surprisingly, education almost immediately became the major political arena for black militants. Undeniable evidence of low mobility rates, traceable in large part to unsuccessful academic careers in the public schools, was political ammunition for a generation of blacks that had not been "adequately" socialized to accept only undesirable social positions with low rewards. Soon the educational selection-allocation system was under direct attack, and demands were made for special programs and procedures at all school levels to provide better opportunities for economically disadvantaged members of minority groups. In New York City, average reading test scores by school and grade level are now published each year in the New York Times, and the schools are increasingly told they will be held accountable for results.

---

[40] Miriam L. Goldberg, A. Harry Passow, and Joseph Justman, The Effects of Ability Grouping. New York: Teachers College Press, 1966.

Design and operation of internal allocation systems for schools is at best a messy job of mixing students, teachers, and curriculum; and whatever merit or careful planning may have prompted a system to be adopted, these are all too easily displaced by more practical considerations of scheduling, especially in large secondary schools. Hence the art of judging whether or not a particular system of grouping is working or has a certain impact is virtually non-existent. Given modern computer technology and extensive testing programs, most school superintendents have had the technical capacity for some years to trace carefully the movement of groups of students through the system and to ask some rather pointed questions about what happens. The fact that this has not occurred is further testimony to the types of roles superintendents characteristically play. However, the demand for school accountability may well force considerable latent educational leadership to become manifest among superintendents during the coming decade.

In addition to the fact that allocation systems seldom get implemented as planned, there are three other factors that make evaluating their impact especially difficult. First of all, one must have longitudinal data on individual students. Most schools, and particularly those that serve the disadvantaged, experience very high rates of student turnover from year to year. Consequently, comparisons of average scores of students in the same school from one year to the next can conceal important differences between those who remain in the school and those who move in or out. Schools typically compile cross-sectional summary data for groups of students each year, but the only place where longitudinal data on individual students can be found is in individual student folders. This information must be coded and stored centrally in order to permit longitudinal analysis, and few systems have instituted such a practice. Moreover, long range effects might be far more important than those identifiable while students remain in school. Ironically, the current concern with privacy of school records information threatens to make compiling of longitudinal information very difficult, if not impossible, in many schools today, but no intelligent system of accountability can be developed without it.[41]

The second factor that makes assessing the impact of grouping practices especially difficult is that one can never be sure that he is comparing groups that are alike in all respects except for their grouping experiences. That is to say, schools are complex organizations where many factors might intervene to produce different results; and one can never feel completely confident that the quality of teaching, student culture, or other factors might not account for results obtained unless samples are extremely large and these variables have been adequately measured and analysed using multivariate techniques.

A third factor that contributes to the special difficulty in studying selection-allocation systems and their impact is a lack of agreement as to which impact or dependent variable one is interested in assessing. In the midst of the present concern with raising the academic performance levels of economically disadvantaged groups, it is easy to forget that schools are institutions charged with other important goals. If the cost of significantly raising academic performance levels as measured by standardized tests is to significantly increase levels of mental illness or some other socially undesirable result, we may wish to reconsider our priorities and the goals of our programs. Indeed, the relevance of high standardized test scores for many of the positions for which they are now considered prerequisites has also become suspect in recent years.[42] However, if one is to consider effects of grouping systems other than academic achievement, one must also collect this information and be able to relate it to the longitudinal information about individual students. (In the study that follows, we were especially interested in how academic self-image and ambition were related to grouping experiences of students, and this and other attitudinal information was collected by means of a self-administered questionnaire distributed to seniors in their English classes.)

---

[41] Guidelines for the Collection, Maintenance and Dissemination of Pupil Records. New York: Russell Sage Foundation, 1970.

[42] Ivar E. Berg, Education and Jobs: The Great Training Robbery. New York: Praeger, 1970.

To summarize, at least since Plato men have envisioned a selection-allocation system that would incorporate tests that could validly distinguish those who were best suited for training to assume differently ranked and rewarded positions in society. American schools have tended to promote the fiction that readily available ability and achievement tests could do this job and that placement into instructional groups was based on these tests. Repeated evidence that success in school was largely determined by social factors tended to be dismissed as not being the responsibility of the school until recent years when the low success rates of blacks in the public schools became a major political issue for black militants. Traditionally school superintendents have remained relatively aloof from intra-school student allocation decisions, but recent demands for school accoutability and public disclosures of standardized test scores suggest that a performance criterion will be used in holding schools accountable. These factors may force superintendents to play a more active role in future allocation decisions.

The basic aims of the text that follows are to outline the functioning of a school system with respect to student allocation and to relate this system mapping to the decision-making role of the superintendent. The first of these tasks is descriptive and much of this report summarizes how the student allocation process works at the high school level in Transurbia. Our treatment of the decision-making function of the superintendent is more analytic and, for reasons to be discussed, partly theoretical. There is also a third objective toward which this report aims and this is to point out some of the social consequences of the present student allocation system regardless of whether these consequences are susceptible to administrative change. This topic is covered in the final chapter of this report.

The remainder of the report is organized into chapters which correspond with the major aims of this research: Chapter Two describes in some detail the student allocation system; Chapter Three discusses the decision-making function of the superintendent with regard to student allocation and related matters; Chapter Four deals with some of the social consequences of the present student allocation system. In addition, as noted in the Preface, we have appended a fairly detailed account of our field work experience in Transurbia, the survey instrument and school records codesheet utilized in this study, and the original proposal for the study.

## CHAPTER II

## The Transurbia Student Allocation System

The basic allocation pattern of public education in America starts with attendance at neighborhood elementary schools. These schools feed into junior high schools serving a larger residential area, and the junior high schools feed into high schools serving a still larger residential community. Students progressing through this system move from neighborhood schools to ones that are based on larger residential units, but the selection criterion remains the location of residence or sending district. Discounting busing programs that exist to foster racial integration, the usual exceptions to a residence-based allocation pattern to schools are specialized vocational schools at the secondary level. Such specialized schools are rare outside large city school systems, and they do not exist in Transurbia.

Eighth grade students in Transurbia who remain within the public school system are assigned to one of two comprehensive high schools. The decision process is highly routinized: students are assigned to high school according to their residence district. Though **impersonal,** this sorting mechanism has several important consequences. The one which immediately concerns us is the distribution of students by race and academic aptitude. Tables I and II summarize the situation. Overall, 78% of students who attended high school with the class of 1970 cohort group were black and 22% were white. Nonetheless, 75% of the seniors attending the smaller high school were white - clearly not a random occurrence. (Table I) The racial distribution of students reflected a tradition common to many American communities -- that school districts tend to be drawn so as to be homogeneous by social class and ethnicity. Most of the incoming blacks have settled in the lower social class areas of Transurbia where the land values are lower and the opportunity for multi-family housing is greater, and thus the preponderance of blacks at the larger high school.

Accompanying racial imbalance, we find a large disparity in academic aptitude, as measured by standardized tests, between students in the two high schools. (Table II) The disparities were most striking in language aptitude at the 9th and 11th grade levels.

# TABLE I

## HIGH SCHOOL ATTENDED BY RACE
## CLASS OF 1970

| | School A | School B | TOTAL PER CENT |
|---|---|---|---|
| Per Cent Black | 94 | 25 | 78 |
| Per Cent White * | 6 | 75 | 22 |
| | 100% | 100% | 100% |
| N= | (750) | (236) ** | (986) |

* Includes a small number of Puerto Rican and Oriental students

** Racial identification was missing for an additional 29 students who attended School B so that the full total for the 1970 class was 265.

## TABLE II

## HIGH SCHOOL ATTENDED BY MEDIAN SCORES ON SELECTED STANDARDIZED TESTS

| | School A | School B |
|---|---|---|
| Median I. Q. Score - 8th Grade | 102<br>(405)* | 109<br>(200) |
| Median Language (SCAT)** Score - 9th Grade | 45<br>(408) | 68<br>(170) |
| Median Math (SCAT) Score - 9th Grade | 27<br>(409) | 54<br>(169) |
| Median Language (SCAT) Score - 11th Grade | 37<br>(378) | 59<br>(178) |
| Median Math (SCAT) Score - 11th Grade | 34<br>(377) | 44<br>(178) |

* Numbers of cases are presented in parentheses through this report.

** School and College Abilty Test

Ignoring the issue of validity of such tests, the data suggest that the schools have to treat different student inputs. Our goal in the remainder of this chapter is to describe the nature of these treatments, or throughputs.

Consistent with our interest in administrative decision-making we shall refer to the manner in which students are accommodated within the two schools as the internal allocation system. This vocabulary suggests that a rational allocation system intervenes in the distribution of students to classroom units within schools. What is certain at the outset is only this: that students of varying backgrounds entered the two schools in the ninth grade, and that they were distributed to various classrooms. In this chapter we shall describe the nature of the allocation process - what it looks like to an outside observer. We shall not seek to interpret the present grouping arrangements until later in this report.

## Grouping Classification at the Two Schools

The grouping pattern within the two schools were different though they shared one important dimension: students were distributed into various curricula at each school. Both schools offered three basic curricula: College Preparatory, General, and Business, and these distinctions were maintained most strictly in their English and Math programs. [1] They differed in the allocation system within the curriculum divisions: School A used ability grouping and School B assigned students in a random fashion to classroom units within each curriculum. Table III shows the proportion of students in each of the curriculum divisions in 10th, 11th, and 12th grade. As can be seen from this Table, the majority of students at each school enrolled in the College Preparatory curriculum.

---

[1] In this report we shall focus on student allocation to English classes since curriculum and ability groupings are most carefully governed in this area. It is possible that students cross curriculum assignments according to particular subject areas; we were unable to process the school record data in sufficient detail to ascertain this. We are supposing English grouping an important determinant of a student's overall program but this supposition would benefit from further examination.

## TABLE III

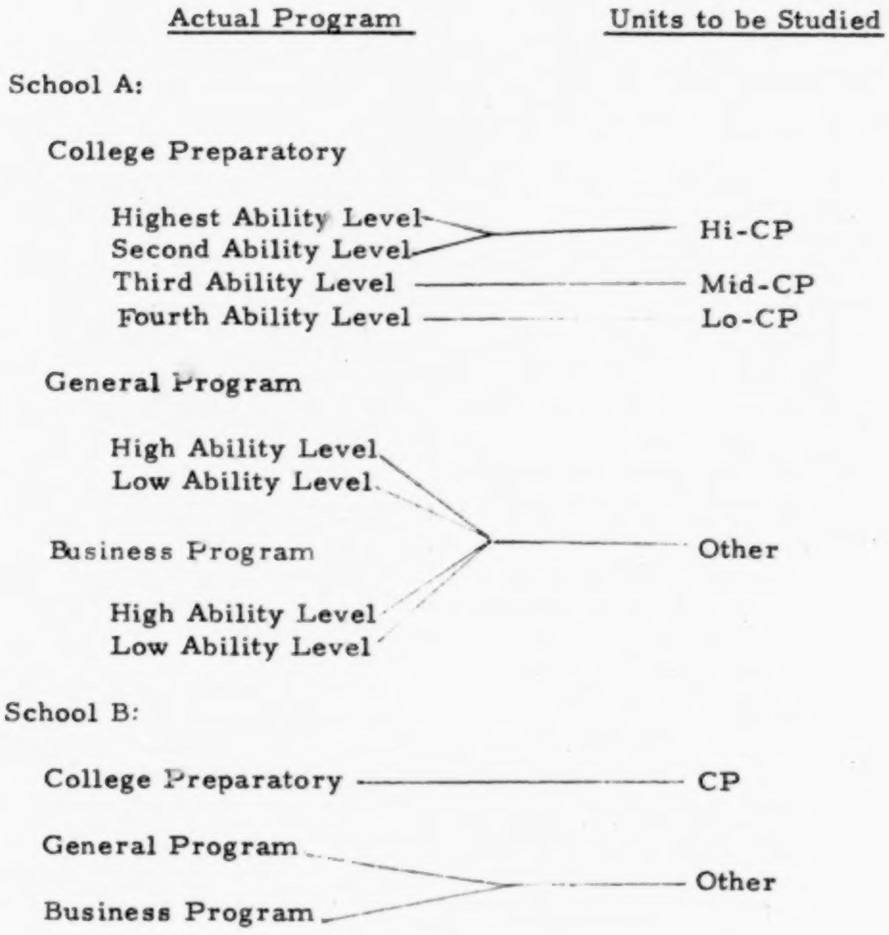
## PROPORTION OF STUDENTS ENROLLED IN THE THREE CURRICULA, GRADES 10-12

| | School A | School B |
|---|---|---|
| **10th Grade** | | |
| College Preparatory | 57% | 53% |
| General | 43% | 24% |
| Business * | -- | 23% |
| | 100% | 100% |
| Total Number | (444) | (191) |
| **11th Grade** | | |
| College Preparatory | 57% | 54% |
| General | 20% | 24% |
| Business | 23% | 22% |
| | 100% | 100% |
| Total Number | (459) | (208) |
| **12th Grade** | | |
| College Preparatory | 52% | 57% |
| General | 20% | 7% |
| Business | 28% | 36% |
| | 100% | 100% |
| Total Number | (425) | (185) |

*At School A, Business was not a separate curriculum in terms of English class groupings at the 10th grade level.

In order to highlight important differences in the internal allocation systems of the two schools, and at the same time divide the student cohorts into categories of sufficient size, we will use the grouping divisions set out in the accompanying diagram. At School A this means dividing the College Preparatory group into ability groups and combining the two non-College Preparatory groups. At School B, the College Preparatory group will be contrasted with students not in the College Preparatory program. Table IV shows the

## DIAGRAM ONE: DERIVATION OF GROUPING UNITS



Actual Program

Units to be Studied

School A:

College Preparatory

Highest Ability Level

Second Ability Level

Hi-CP

Third Ability Level

Mid-CP

Fourth Ability Level

Lo-CP

General Program

High Ability Level

Low Ability Level

Business Program

Other

High Ability Level

Low Ability Level

School B:

College Preparatory

CP

General Program

Business Program

Other

proportion of 1970 senior classes in each of these categories at the two schools for grades 10-12.

Before proceeding to discuss characteristics associated with these devised categories, we should call attention to several limitations which these particular divisions entail. The most serious of these concerns the distinctions between the General and Business curricula which our classification scheme obscures. Our decision not to consider this distinction was brought about by the need to limit our analysis to a manageable amount of data. At the same time, we are aware that there are a variety of important differences between these curriculum groups at each of the schools - for example, girls tend to predominate in the Business curriculum and boys in the General. And, of course, the actual program of instruction is greatly different. On the other hand, we felt that the distinction of most importance to the school system concerned ability grouping. To emphasize this, we have split the College Preparatory curriculum at School A into three levels, each having a significant number of students. [2] Had we proceeded to subdivide the other two curricula into ability groupings at School A, the number of students in each would have been too few to allow detailed analysis. Instead, if we had subdivided by ability but not curriculum in the non-college preparatory groups, we would be analyzing a wholly contrived arrangement since high ability "general" and "business" students do not share an actual program together. Though our classification scheme places an important limitation on the scope of this inquiry, it allows us to emphasize differences within the dominant College Preparatory curriculum at each school and it effectively underscores a variety of properties associated with ability grouping in this school system.

Our primary task in the remainder of this chapter is to describe the internal allocation systems of the two public high schools in accordance with the classification scheme discussed above. There are three components to this description: first we will

---

[2] There are four ability levels within the College Preparatory program at School A. The first two were collapsed into one level in order to have an adequate number of subjects for analysis. See Diagram One above.

## TABLE IV

## PROPORTION OF STUDENTS IN ENGLISH GROUPING CATEGORIES, GRADES 10-12

### School A

| | Grade 10 | | Grade 11 | | Grade 12 | |
|---|---|---|---|---|---|---|
| COLLEGE PREP | | | | | | |
| High | 14% | 58% | 12% | 58% | 12% | 53% |
| Middle | 20% | | 25% | | 17% | |
| Low | 24% | | 21% | | 24% | |
| Other | 43% | | 43% | | 48% | |
| | 100%<br>(444) | | 101%<br>(459) | | 101%<br>(427) | |

### School B

| | Grade 10 | Grade 11 | Grade 12 |
|---|---|---|---|
| COLLEGE PREP | 53% | 54% | 57% |
| Other | 47% | 46% | 43% |
| | 100%<br>(191) | 100%<br>(208) | 100%<br>(185) |

examine grouping arrangements in terms of the background characteristics of the students; we will then relate these grouping categories to system related characteristics of the students, specifically grades and absences; finally, we will discuss the extent to which grouping assignments in English are stable from year to year.

## Background Characteristics of Students

We would like to know the extent to which the school's grouping patterns differed regarding types of students they received. There are six background variables which we shall consider: socio-economic background, family structure, length of residence, sex, race, and academic aptitude. Our object is to characterize each group in terms of the distribution of students within it regarding these characteristics.[3] We want to see if these grouping patterns receive different sorts of students according to these various dimensions. Whether groups should differ in such ways is a question we shall discuss later. Though these six variables are not a full inventory of relevant student background characteristics, each is of major interest by itself and together they provide a multi-faceted description of group composition.

To begin let us examine the socio-economic status of the students in each grouping pattern for grades 10-12. Of the six variables we shall be considering, SES data is the least extensive. As presented in Table V, high SES is equivalent to father's occupation being either "white collar" or "professional," information which was coded from school records. Unfortunately, this information was not available in many cases, especially at the lower ability levels.

---

[3] In keeping with this objective, we shall use a series of compositional tables in this chapter. Unlike predictive tables, these tables are not suitable for inferring the chances of a student with a certain characteristic being assigned to a particular group. Instead, these tables show the proportion of students in each grouping with a particular characteristic. These compositional tables describe the kinds of groups the schools get with the present allocation system.

## TABLE V

## PERCENT WHITE COLLAR FATHERS ACCORDING TO ENGLISH GROUPS, GRADES 10-12

| | School A<br>Curriculum Group | | | | School B<br>Curriculum Group | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | C. P. | Other |
| 10th Grade | 30%<br>(40) | 26%<br>(42) | 18%<br>(60) | 22%<br>(59) | 53%<br>(85) | 30%<br>(66) |
| 11th Grade | 30%<br>(37) | 28%<br>(64) | 20%<br>(49) | 19%<br>(63) | 53%<br>(90) | 22%<br>(89) |
| 12th Grade | 33%<br>(33) | 27%<br>(48) | 27%<br>(49) | 20%<br>(64) | 52%<br>(81) | 32%<br>(62) |

Nevertheless, these data appear to be sufficiently reliable for the purpose of characterizing the relative SES composition of the grouping arrangements, as we were able to obtain cross-validation from the student questionnaires.[4] Looking now at Table V, we see a consistent pattern, both with Schools A and B and between the two schools. As noted earlier, students at School B were generally more middle class. Interestingly, students in the non-College Preparatory programs at School B were proportionately as middle class as students in the upper ability College Preparatory program at School A. Within School A, a fairly consistent, weak relationship was found between the ability level of group and SES background of its students; the higher the ability level, the higher the SES background level. In School B, an even stronger relationship emerged between curriculum categories, the College Preparatory students coming from higher SES homes. At both schools, these relationships persisted over the three-year period from grade 10 to grade 12. At the descriptive level, these data point out that the systemmatic grouping patterns practiced at each of these high schools articulated the social class differences found within the community.

A second background variable on which data were available is family structure. In Table VI family structure is indicated by the percentage of students in each group living in a home where the mother and father are both present. Since there is generally a higher incidence rate of behavioral problems among students from broken homes in our society, this variable gives us an important second dimension in our description of grouping patterns. At School A a very clear pattern emerges over the three years: the higher the ability level, the higher the percentage of students from homes with both parents present. The magnitude of the family structure difference between High College

---

[4] Student reports of father's occupation were consistently higher than those taken from the school records; however, the rank order of the groups at the 12th grade level was identical - leading us to believe that the school record measure of SES is an acceptable approximation of the relative SES distribution.

## TABLE VI

## PERCENT FROM HOMES WITH BOTH PARENTS PRESENT ACCORDING TO ENGLISH GROUPS, GRADES 10-12

| | School A Curriculum Group | | | | School B Curriculum Group | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | C. P. | Other |
| 10th Grade | 76%<br>(55) | 59%<br>(75) | 60%<br>(93) | 56%<br>(169) | 76%<br>(97) | 70%<br>(88) |
| 11th Grade | 78%<br>(50) | 67%<br>(102) | 54%<br>(85) | 49%<br>(169) | 75%<br>(109) | 68%<br>(89) |
| 12th Grade | 74%<br>(47) | 73%<br>(64) | 63%<br>(87) | 47%<br>(174) | 79%<br>(99) | 71%<br>(75) |

Preparatory and non-College Preparatory students is also worthy of attention. Approximately 50% of a non-College Preparatory student's fellow students were from broken homes whereas only about 25% of an upper ability, College Preparatory student's peers were from broken homes. In contrast, the curriculum differences at School B were not very large, though they consistently favored College Preparatory students.

Another family-related characteristic which differed among the various groups was length of residence. Seniors were asked how long they had been resident in Transurbia and this information is summarized, according to the 12th grade English group, in Table VII. Looking at this table, we note that the older residents were disproportionately represented in the College Preparatory curriculum, and at School A, in the upper ability levels. Especially striking is the large proportion (72%) of the long-time residents in the High College Preparatory group at School A, in contrast to the low proportion (28%) in the non-College Preparatory group.

A fourth descriptive dimension is the balance by sex within group assignments. A first glance at Table VIII fails to reveal any consistent relationship between the distribution of sex among the various groups, except at School B, where there was a consistently higher percentage of boys in the College Preparatory program. To a lesser degree, this pattern was also found at School A, where girls predominated consistently in the non-College Preparatory group. Had we not combined the business and general curricula, differences in sex ratios between these would have been very obvious - girls outnumbering boys in the Business program and the reverse in the General program. Overall, there were more girls than boys in both schools. It could not be determined from the school records whether this was largely the result of higher dropout rates or higher private school attendance among males. In terms of the College Preparatory program on which we are focusing here, sex ratios do not appear to be especially important.

Another factor which we might expect to vary somewhat according to group is race. Table IX shows that the major differences are those which occur between schools: School A was largely black; School B was mostly white. Within each of these schools and most notably within School B, there was a tendency for whites to be overrepresented

## TABLE VII

## LENGTH OF RESIDENCE IN TRANSURBIA ACCORDING TO 12th GRADE ENGLISH GROUPS

| | School A | | | | School B | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | CP | Other |
| 5 Years or Less | 10% | 24% | 27% | 47% | 18% | 26% |
| 6 - 10 Years | 18% | 17% | 23% | 25% | 13% | 22% |
| 11 Years or More | 72% | 59% | 50% | 28% | 69% | 52% |
| | 100% | 100% | 100% | 100% | 100% | 100% |
| | (40) | (46) | (56) | (83) | (94) | (58) |

## TABLE VII

## PERCENT MALES ACCORDING TO ENGLISH GROUPS, GRADES 10-12

| | School A<br>Curriculum Group | | | | School B<br>Curriculum Group | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | CP | Other |
| 10th Grade | 56%<br>(61) | 36%<br>(86) | 48%<br>(105) | 43%<br>(204) | 46%<br>(101) | 38%<br>(89) |
| 11th Grade | 43%<br>(56) | 47%<br>(113) | 56%<br>(95) | 40%<br>(194) | 47%<br>(112) | 37%<br>(91) |
| 12th Grade | 49%<br>(51) | 38%<br>(71) | 52%<br>(97) | 44%<br>(198) | 45%<br>(102) | 36%<br>(80) |

## TABLE IX

## PERCENT BLACKS ACCORDING TO ENGLISH GROUPS, GRADES 10-12

| | School A | | | | School B | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | CP | Other |
| 10th Grade | 87%<br>(61) | 94%<br>(87) | 93%<br>(107) | 96%<br>(207) | 13%<br>(100) | 31%<br>(84) |
| 11th Grade | 91%<br>(56) | 92%<br>(113) | 98%<br>(95) | 96%<br>(194) | 15%<br>(111) | 33%<br>(85) |
| 12th Grade | 92%<br>(51) | 94%<br>(71) | 95%<br>(100) | 96%<br>(198) | 18%<br>(102) | 32%<br>(77) |

in the upper curriculum. Overall, the racial balance within grouping patterns at each of the high schools largely reflected the racial distribution of the school generally, though blacks were somewhat underrepresented in the College Preparatory program at School B.

A final background factor which we would expect to be related to the student grouping patterns is scholastic ability, as indicated by standardized aptitude test and reading scores. Whether or not the standardized tests utilized by the school system we are studying here are valid measures of student ability is subject to a controversy in which we shall not partake. What matters to us is that these tests are administered and their results associated with the school records of the individual students. In this sense, the school system treats these results as meaningful. Since system personnel have available to them a variety of such aptitude test scores, it is reasonable to see if there was an association between student performance on these tests and group placement. Whether an association between test results and groups is causal or coincidental is unimportant in that regardless of present practice, these tests allow students to be grouped on the basis of test performance. For example, we might discover a very strong association between scoring high on a particular aptitude test and being placed in the highest ability group even though placement in this group was actually determined wholly by teacher recommendation. From our point of view, what matters is that this pattern could be altered as a policy matter by reassigning students on the basis of test scores. The potential for allocation on this basis is always present.

Table X summarizes the relationship between grouping in English for grades 10 through 12 and aptitude and reading test measures at the two schools. Three tests were available system-wide: an I.Q. test administered to all public school students in the 8th grade; a 9th grade SCAT aptitude test; and an 11th grade SCAT aptitude test; reading tests were administered only at School A. In Table X we have set out the means by English group for the system-wide I.Q. and language aptitude SCAT tests as well as the School A reading tests. Of particular interest are the items set off by an asterisk since these indicate tests that could have been used to assign students to groups. These test results are measures of student input to the groups. Looking at Table X, we observe evidence of a consistent and strong relationship between aptitude scores and group placement at both schools: the higher the curriculum and/or ability group, the higher the aptitude scores of students. Interestingly, the strong relationship between aptitude and group is suggested for all measures -- those of student input as well as those subsequent to group placement. Grouping itself does not appear to exert any marked influence on aptitude test performance since the profiles of the groups on the tests are what one would anticipate from the input profiles. On the other hand, close correspondence between grouping and these scores suggests that aptitude tests may serve as a basis for group placement decisions.

That aptitude test results should relate to group placement is not a surprising phenomenon, especially at School A where official policy specified ability grouping in English. Nor is it surprising that aptitude scores should differ markedly by curriculum at both schools: college preparatory students should exhibit higher academic aptitude. What is probably most interesting about the data shown in Table X is that the ability groups at School A should differ as sharply as they do on the aptitude measures, since none of these tests was supposed to be used in determining group placement -- that was the function of the reading tests administered annually at School A under the supervision of the English Department. It is also interesting to note that the non-College Preparatory students at School B had test scores that were consistently higher than the Low College Preparatory group at School A.

Whatever the causal relationship, we do find large differences between groups on measures of general academic and reading aptitude. These findings parallel the relationship between group placement and other student background factors, notably SES, length of residence, and family structure.

## System Related Characteristics of Groups

So far in this chapter we have discussed the internal allocation system with regard to a variety of student background characteristics. An alternate way of describing these groups is to relate them to student

## TABLE X

### MEAN SCORES ON I.Q., LANGUAGE APTITUDE, AND READING TESTS ACCORDING TO ENGLISH GROUPS, GRADES 10-12

| | School A | | | | School B | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | CP | Other |
| **Grade 10** | | | | | | |
| JHS I.Q. * | 117 | 107 | 98 | 93 | 116 | 103 |
| 9th Lang. SCAT* | 75 | 57 | 41 | 28 | 75 | 48 |
| 9th Reading * | 11.3 | 9.3 | 7.9 | 7.3 | --- | --- |
| 10 Reading | 12.2 | 10.2 | 9.5 | 8.3 | --- | --- |
| **Grade 11** | | | | | | |
| JHS I.Q. * | 119 | 106 | 100 | 92 | 116 | 103 |
| 9th Lang. SCAT * | 75 | 58 | 41 | 28 | 75 | 47 |
| 11Lang. SCAT | 71 | 51 | 32 | 25 | 66 | 43 |
| 10th Reading * | 12.3 | 10.6 | 8.9 | 8.4 | --- | --- |
| 11th Reading | 12.4 | 11.1 | 9.2 | 8.7 | --- | --- |
| **Grade 12** | | | | | | |
| JHS I.Q. * | 115 | 108 | 99 | 95 | 115 | 104 |
| 11th Lang. SCAT * | 74 | 49 | 36 | 27 | 63 | 46 |
| 11th Reading * | 12.6 | 10.8 | 9.3 | 8.8 | --- | --- |

* Indicates that test may be as input measure

properties associated with the school itself, specifically absences and grades. In a crude way, the proportion of students obtaining high grades in English within an English grouping is a measure of the opportunity structure of the group. For example, if 33% of the students in an ability grouping obtain an A or B in English, this percentage may represent the opportunity of any student in this group to obtain such a grade: it reflects the grading curve. Even more speculatively, the absence rate of a group may be an indicator of student dissatisfaction with school. Two ways in which measures of grades or absences may be used to characterize a group are: first, utilizing the previous year's experience, as a measure of student input; secondly, the year's experience itself, as an indicator of opportunity or dissatisfaction with school.

Turning to Table XI, we see that there is a very strong relationship between curriculum and/or ability level and grades given and grades "inputted." Generally speaking, the lower groups received students whose overall grade record as well as grades in English specifically were lower than students in the upper groups. For example 61% of the students entering "HiCP" English in 10th grade had received an A orB in English the previous year whereas only 21% and 29% of the "MidCP" and "LoCP" entrants had done similarly. Reading down the table we note an analogous opportunity structure existed for these groups since 52% of that year's "HiCP" English students received an A orB while only 37% and 24% of the "MidCP" and "LoCP" students did likewise. This pattern matching differing grade history inputs and differing grade opportunity curves is repeated at the 11th and 12th grade levels.

The pattern at School B is quite similar as regards grade history input and opportunity curves between curricula. In light of our observations concerning the relationship between academic aptitude and grouping, it seems reasonable to speculate that in both schools, higher academic aptitude is associated with higher quality academic performance and is rewarded with higher grades. This, of course, is an almost universal public school practice though from one perspective at least, it appears to us an odd one. If academic aptitude is basically something which students bring to the schools rather than something which they acquire there, it may be unfair to punish students with low grades for properties largely independent of student-school interaction. Why should bright students be rewarded disproportionately? Regardless, it is important to keep in mind that the relationship between grouping and grades is very strong in the Transurbia system.

## TABLE XI

## PERCENT HIGH GRADES ACCORDING TO ENGLISH GROUPS, GRSDES 10-12

| | School A | | | | School B | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | CP | Other |
| **10th Grade** | | | | | | |
| 9th Gr. Eng. * | 61% | 21% | 29% | 11% | 42% | 15% |
| % A + B | (59) | (79) | (98) | (155) | (91) | (73) |
| 10th Gr. Eng. | 52% | 37% | 24% | 21% | 43% | 30% |
| % A + B | (61) | (87) | (107) | (205) | (102) | (88) |
| 10th Gr. Math. ** | 61% | 29% | 13% | 17% | 42% | 45% |
| % A + B | (57 ) | (80) | (95 ) | (163) | (100 ) | (78) |
| **11th Grade** | | | | | | |
| 10th Gr. Eng. * | 55% | 34% | 19% | 21% | 46% | 28% |
| % A + B | (49 ) | (103 ) | (84 ) | (169 ) | (99) | (81 ) |
| 10th Gr. Math. * | 70% | 30% | 10% | 13% | 48% | 37% |
| % A + B | (47 ) | (100 ) | (77 ) | (155 ) | (101 ) | (75 ) |
| 11th Gr. Eng. | 49% | 28% | 17% | 12% | 50% | 20% |
| % A + B | (53 ) | (107 ) | (87 ) | (170 ) | (108 ) | (81 ) |
| **12th Grade** | | | | | | |
| 11th Gr. Eng. * | 77% | 21% | 14% | 13% | 63% | 21% |
| % A + B | (48 ) | (66 ) | (94 ) | (168 ) | (101 ) | (73 ) |
| 12th Gr. Eng. | 65% | 23% | 26%*** | 16% | 52% | 31% |
| % A + B | (51 ) | (69 ) | (97 ) | (188 ) | (102 ) | (77 ) |

* Input measures

** Modal grades were coded from student permanent record cards. They are the average grade received in major subject areas.

*** There were four classes of low CP 12th Grade English. Two of these had a relatively high percentage of A's and B's, two a relatively low percentage. The two classes with high grades also received a disproportionately high percentage of high aptitude students. It was as if an extra ability level had been formed.

A second school-related student characteristic which connects to the student allocation system is school attendance. Table XII documents a very consistent relationship between school attendance and grouping: the lower the ability and/or curriculum group, the lower the school attendance of its students. Unfortunately, attendance figures were only collected for the 9th and 10th grade years so that measures of attendance input and attendance the same year are available only for the 10th grade. Despite this, it is clear that a strong relationship existed between absence rate and group placement at both schools: the lower the group placement, the higher the mean number of absences among group members. Looking at Table XII, considering 9th grade absence rate inputs, it might appear that the 10th grade absence rate issued from the characteristics of the entering students. But if we consider the relative increase in absence rate by group, as shown by the percent increase figures at the bottom of Table XII, we see that these were strongly related to group placement. The Low College Preparatory group at School A and the non-College Preparatory group at School B are especially interesting in this respect. In addition to having a history of a relatively high absence rate among students entering these 10th grade English groups, the absence rate of students in them increased more than those of the other groups in their own school. The specific reasons for these occurrences are not clear.

Thus we discover that the pattern between grouping and school-related characteristics is similar to that between student background characteristics and grouping. Groups tend to differ greatly in the sorts of students they receive and the experiences they provide these students. In the next section we will consider a somewhat different line of inquiry into the nature of the grouping practices of the Transurbia high schools. We will focus on the relationship between grouping in English one year and placement in English the following year.

## Vertical Mobility in English Group Assignments

Up to this point our description of the student allocation system in Transurbia has dealt exclusively with group composition. A different aspect of grouping concerns the permanence of group assignment from

## TABLE XII

## MEAN ABSENCES AND PERCENT INCREASE IN ABSENCE FOR 10th GRADE ENGLISH GROUPS

| | School A | | | | School B | |
|---|---|---|---|---|---|---|
| | HiCP | MidCP | LoCP | Other | CP | Other |
| 9th Grade Mean Absences* | 8.2**<br>(57) | 9.6<br>(74) | 10.6<br>(97) | 18.3<br>(144) | 8.7<br>(91) | 10.7<br>(73) |
| 10th Grade Mean Absences | 11.7<br>(59) | 16.0<br>(80) | 19.5<br>(101) | 23.7<br>(169) | 10.2<br>(102) | 15.4<br>(89) |
| Mean Increase | +3.5 | +6.4 | +8.9 | +5.4 | +1.5 | +4.7 |
| Mean Increase as % of 9th Grade Base Absence Rate | 43% | 67% | 84% | 29% | 17% | 44% |

* Input measures

** Figures refer to average number of annual absences year to year. As in society generally, the schools' stratification systems allow for upward and downward mobility: students can change curriculum and ability groupings. The extent to which this occurs and the predominant direction of such shifts define the nature of the school's stratification system as either upwardly and downwardly mobile or relatively static. Where grouping patterns vary in student input systematically year after year, as they appear to do in Transurbia, the amount of stratification is especially important. If the system is fairly stable, it is likely that the effects of differing contexts will be cumulative. That is, the same students will be exposed to relatively enriched and relatively impoverished environments year after year.

In Transurbia students are stratified by curriculum at both public high schools and further stratified by "ability" within curriculum groups at School A. Looking at Table XIII, we see that changes in curriculum assignments are uncommon at School B, while their occurrence varies by ability level and school year at School A. At School B, in neither year does change in curriculum assignment exceed 10% of the students. At School A also there is little overall change in curriculum assignment. However, between 10th and 11th grade, fully 20% of the Low College Preparatory students dropped out of the College Preparatory program and 16% of the non-College Preparatory sophomores entered the college program as juniors. On the other hand, between 11th and 12th grade, very few non-College Preparatory students entered the College Preparatory program although a considerable number of College Preparatory juniors dropped out. It is curious that this one way slippage between 11th and 12th grade did not also occur at School B. It is possibly due to the lack of improvement in reading test results administered in March of the junior year at School A (c.f. Table X).

Grouping patterns at both schools but especially at School B are rather stable. Thus a cumulative effect from repetitive group contexts may be suspected. At School A this effect may be lessened by movement between adjoining ability groups of notably different character. For example, looking at Table XIII, we see that 21% of the High College Preparatory sophomores and 23% of the Low College Preparatory sophomores became Middle College Preparatory juniors. Between 11th and 12th grades, these figures were 22% and 13% respectively. It is interesting to note that the net movement among ability levels was

## TABLE XIII

## VERTICAL MOBILITY IN ENGLISH GROUP ASSIGNMENTS

### School A

|  |  | 10th Grade English |  |  |  |
|---|---|---|---|---|---|
|  |  | HiCP | MidCP | LoCP | Other |
| 11th Grade English | HiCP | 75 | 1 |  | 1 |
|  | MidCP | 21 | 79 | 23 | 5 |
|  | LoCP | 4 | 14 | 57 | 10 |
|  | Other |  | 5 | 20 | 84 |
|  |  | 100% | 99% | 100% | 100% |
|  |  | (57 ) | (73 ) | (96 ) | (157 ) |

|  |  | 11th Grade English |  |  |  |
|---|---|---|---|---|---|
|  |  | HiCP | MidCP | LoCP | Other |
| 12th Grade English | HiCP | 63 | 18 |  |  |
|  | MidCP | 22 | 45 | 13 |  |
|  | LoCP | 6 | 30 | 72 | 1 |
|  | Other | 8 | 7 | 15 | 99 |
|  |  | 99% | 100% | 100% | 100% |
|  |  | (49 ) | (97 ) | (85 ) | (146 ) |

### School B

|  |  | 10th Grade English |  |
|---|---|---|---|
|  |  | CP | Other |
| 11th Grade English | CP | 93 | 10 |
|  | Other | 7 | 90 |
|  |  | 100% | 100% |
|  |  | (98 ) | (82 ) |

|  |  | 11th Grade English |  |
|---|---|---|---|
|  |  | CP | Other |
| 12th Grade English | CP | 95 | 7 |
|  | Other | 5 | 93 |
|  |  | 100% | 100% |
|  |  | (101 ) | (74 ) |

downward at School A, as was the curriculum level movement there; this contrasts with the slight upward curriculum movement at School B.

## Some Reflections

In this Chapter we have looked at grouping patterns according to various properties in their students. Significantly a consistent pattern at both schools emerges from this examination: socially favored characteristics predominate in the upper groups. One finds a lower proportion of students from broken homes, a higher proportion of students with middle and upper-middle class backgrounds, a higher proportion with above average intelligence scores, a lower rate of absences and so forth. This finding is altogether consistent with what sociologists have written about systems of societal stratification generally -- that elite groups tend to acquire a disproportionate share of all social riches. [4]

In the remainder of this chapter, we would like to explore briefly the implications of this phenomenon for the internal allocation systems of the high schools studied here.

Since groups differ on socially important properties, the existence of deliberative grouping arrangements raises questions of moral and educational responsibility. The likelihood that ability and curriculum groupings lead to the creation of unequal contexts, apart from their limited educational rationale, is disturbing. Consider the potential effects on a young person of being placed in a group where disruptive behavior is quite common and is either tacitly or openly approved by the majority of group members versus the same youth being assigned to a group in which disruptive behavior is rare and disapproved by the large majority of group members. In the one we might expect a normal individual to seek the approval of his peers by being disruptive whereas in the other circumstances cooperative group behavior would be more rewarding. To the extent that administrators assign students to groups with sharply differing characteristics, they necessarily assume the moral burden of exposing the young to certain dominant value sets and behavior patterns.

---

[4] In a technical sense, this tendency for an elite group to possess a relatively large share of social values is called "status consistency." See John H. Goldthorpe, "Social Stratification in Industrial Society" in Class, Status, and Power, Second Edition, edited by Bendix and Lipset, The Free Press, 1966, especially pp. 650-651.

This issue here, however, is rather more complicated both from an educational and moral viewpoint. To begin, it is uncertain that the substitution of balanced contexts would serve the educational objectives of students. Clearly if such groupings were "unmanageable," they probably would foster disruptive and other dysfunctional behavior. If this were so, balanced groupings would scarcely be either educationally or morally enlightened. Also, the fundamental rationale for distinct grouping arrangements is to prepare young people for predictably differing careers: the complexities and potential abuses in formulating such predictions does not alter the reality that different students should realistically receive different training. The job and educational market into which high school students graduate places a premium on such specialized training.

From the point of view of system administrators, the implication of our discussion of this chapter is to note the desirability of maximizing information concerning the effects of on-going grouping practices. The mere existence of unequal contexts does not certify that students are being unfairly processed. It does require, however, that administrators carefully assess the ability of the present educational programs to realize their educational goals and also to examine the indirect social consequences of these programs. If the educational gains are small, the social inequities of the present arrangements should lead to their abrogation or revision.

# CHAPTER III

## Student Grouping and Decision-Making

Up to this point our concern has been to describe the academic grouping patterns of high school students in Transurbia. We have yet to discuss how students are assigned to groups or the social consequences of such decisions. This chapter takes up the former topic- how these decisions are made - and attempts both to describe the processes involved and to place them into a theoretical perspective. The social consequences of the student grouping system will be discussed in the final chapter.

On the whole, decisions on the grouping of students into English sections were made rather differently at the two schools. The process was most involved at School A where ability grouping is practiced within academic curricula, whereas at School B a student's English class assignment would conform to the curriculum in which he is enrolled, but within that curriculum it would be determined by the schedule which minimizes the number of course conflicts among his own courses and those of his peers. Scheduling English classrooms within curricula at School B was actually determined by a computer program which minimized the number of class conflicts. At School B, then, the grouping decision of importance was the choice of academic curriculum. This choice resulted primarily from parent-student-guidance counselor conferences early in a student's high school career - as we saw in Chapter Two, subsequent changes in curriculum grouping were not common. Our study did not focus on the conference system at either school so we shall not speculate concerning the nature of these.[1] In the previous chapter we examined some effects of curriculum placement at School B.

Although the assignment of students to English classroom units was different at School A, it shared an important similarity with School B. At both schools, English classes were offered within curricula- only very rarely would a student cross curriculum lines for an English course. Thus an important aspect of a student's grouping history was fixed via the same parent-student-guidance counselor conference system. Apart from decisions regarding curriculum, which presumably were made on the basis of some combination of perceived academic aptitude, occupational ambition, and family resources, the allocation process at School A was unlike that of School B. Teacher recommendations and reading test scores were brought together at the English Department level, and the English Department Chairman and his staff decided class assignments at School A. They also decided how many upper, middle, and low ability English sections to offer, reportedly on the basis of reading test results.

---

[1] As we noted in the first chapter, this topic was studied in a midwestern high school where it was found that informal norms tended to offset bureaucratic regulations regarding student allocation. A. V. Cicourel and John I. Kitsuse, The Educational Decision-Makers, New York: Bobbs-Merrill, 1963.

Interestingly, while grouping decisions regarding individual students were subject to review at both schools via the guidance counselor conference system, the overall grouping structure was not formally or periodically reviewed at either school, nor was it reviewed at the central administration level. The ability grouping system in School A had been in effect many years. It appeared to us to have passed beyond the stage of questioning. In its defense, we were told that it allowed the staff to deal with a very wide range of reading levels. This explanation was directed to a moot common sense understanding - that academic classes are more successful if students are working at about the same level. No evidence was offered to us in support of this verity and extensive literature on this subject is inconclusive. [2] Similarly at School B, little defense was offered for the random grouping of students within curricula. The system was instituted several years earlier by a former principal who, we were told, felt strongly about the matter. No rationale was added, but staff members seemed to feel that the grouping arrangement was satisfactory. The range of student ability was, of course, also quite wide at School B .

Differences between the grouping procedures in the two high schools were interesting, but more interesting from our systemic perspective was the absence of policy review in this area. That the two public high schools operated differently reflected administrative decentralization within the system, instituted by a former superintendent. That such an important area of educational policy as student grouping continued without systematic review indicated a syndrome which we suspect is very common in American educational systems, and one which the (Transurbia) system only typifies. We will call this syndrome "policy gapping" and would argue that it is almost ubiquitous in educational bureaucracies and that it is the result of structural constraints on the role of school administrators.

---

[2] Miriam L. Goldberg, A. Harry Passow and Joseph Justman, The Effects of Ability Grouping. New York: Teachers College Press, 1966.

Simply defined, policy gapping refers to the absence of program review in an organization. Skipping over many theoretical niceties, our argument runs as follows: programs are regularly ordered events which issue from policy decisions and which imply periodic assessment. The halo of rationality affixed to labeling an organizational event a "program" stems largely from this implication of regularized assessment. In general systems language, a program is implemented policy and it implies a feedback loop passing through administrative decision-making. When, as in the case of student grouping practices in Transurbia, such periodic administrative review is absent (when there is no feedback loop) one finds policy gapping. The intent of this terminology is both to call attention to the absence of feedback and to signal its supposed presence. The policy gap is created specifically because there is no administrative review where one would expect to find it, assuming the organization to be rational.

A thorough discussion of why we believe policy gapping to issue basically from structural patterns in educational organization rather than from a deliberate omission by school system personnel would be too lengthy a theoretical digression in such a report. Also, from the standpoint of the function of this report, it matters very little whether the policy gap we are interested in was created by misguided administrators or by a perversity of organizational structure. What we maintain as essential to our argument is only that any individual instance of policy gapping is not inevitable: feedback loops through the administrative sector can be created. As concerns student grouping, this report itself is both an argument for such feedback and an instance of it.

In the remainder of this chapter, we would like to expand on what seems to us a compelling argument for close periodic administrative review of student grouping practices. At issue is whether student grouping practices should be regarded as a high priority area in terms of an administrator's job function. In order to demonstrate that it should be so regarded, we are going to examine rather schematically the organizational roles of student and administrator and most especially the connection between the two. At the close of the chapter we will add some comments concerning why a policy gap has commonly occurred in the area of student grouping.

## Student Grouping and the Student-Administrator Nexus

Let us begin with some general comments concerning the organizational role of students. In one sense students are unquestionably the most important participants in schools as organizations. That is to say, a necessary and sufficient requirement for an institution to qualify as a school is that it should in some manner process students. By custom, the term "education" is given to this process. There is an empirical sense in which we might examine the student's organizational role as this stems from our definition of schools as student-processing organizations. Students are frequently seen as passive "raw materials" fed through an "educational machine." To be sure, this gross mechanical metaphor badly distorts the day-to-day reality of school life-not all students are passive. However, in terms of the prevailing organizational arrangement of schools, students are largely powerless: they are constrained to visit the educational factory both by law and by custom. While there, they are expected to submit to a variety of procedures determined by others. Among common procedures over which students have little power are assignments to locations within the school, choice of procedures (sometimes called curriculum and/or curriculum materials), and the determination of which parameters are to be used in assessing the fineness of the results (grades, tests, recommendations, and so forth).

The purpose of the school-as-factory metaphor is not to add another polemic against traditional school organization but rather to underscore the extent to which students as a group are removed from authority--though subject to it. Schools are student-processing organizations and traditionally this has meant that students are passive if somewhat recalcitrant participants. [3] In contrast, the structure of the traditional school has greatly empowered school administrators especially in relation to students. A brief classification of common activities in which high school students participate during a school day will help demonstrate this point:

1. Checked in (homeroom period);
2. Sorted into a variety of peer groups where they are required to interact appropriately with peers and with assigned teachers in a series of closed social systems (academic classes);
3. Evaluated by teachers.

In noting these conditions, we wish to emphasize the extensive system of social norms to which adolescents are expected to conform in high schools. Some of these norms reflect general societal values and, to that extent, they are beyond the control of school administrators as well as students. Nonetheless, school administrators most often possess a great deal of discretion concerning several of these conditions and we would argue that it is primarily this discretion which creates the administrator-student nexus.

Expanding on this point, we note that a recent study discovered that most school administrators at all levels perceive their clients to be students. [4] That is, superintendents, primary and secondary school principals, all tend to interpret their job as primarily serving the needs of students. Whatever its basis in actual job performance this claim dramatically differentiates people-processing organizations from other types of organization. For it is unlikely that upper echelon administrators in the industrial sector would claim that their primary clients are the raw materials, or even the workers for that matter. This tendency for school administrators to interpret their jobs as primarily in the service of students makes it reasonable for us to elaborate upon the connection between students and administrators: specifically, in what ways can and does the functioning of administrators affect high school students? We have suggested above that the connection between students and administrators falls largely in the area of structuring student activities and now we will examine this notion more carefully.

---

[3] Student power does, of course, vary considerably. For a classic discussion of the ways in which informal power of students tends to operate in high schools, see Willard Waller, The Sociology of Teaching. New York: John Wiley and Sons, 1934.

[4] Dale Mann, "Administrator/Community/School Relationships in New York State." Report submitted to the New York State Commission on the Quality, Cost and Financing of Elementary and Secondary Education, New York, 1971 (see marginal summary of item 100, p. 326).

By and large, the total influence of schools on students must derive from student-student and student-teacher contact since together these account for the preponderance of the direct personal contacts of students in schools. [5] If administrators are to have influence on students, it most likely will be the result of helping to structure either student-student or student-teacher contact or both. Similarly, school plant, curriculum materials, and so forth are important to the extent that they affect the structure of student interaction and, we believe, would be of trivial influence if not associated with changes in interactional patterns.

To observe that the effect of administrators on students is most usually indirect is not to imply that it is of little importance. On the contrary, their influence is often of great importance, though we feel it tends not to be fully recognized. Consider some of the ways in which administrators help structure student-student and student-teacher interaction patterns:

1. administrators determine fully or are very influential in determining a school's student grouping and curriculum practices;

2. administrators recruit and provide training for teachers;

---

[5] Virtually all sociological literature on schools has underscored in some manner the importance of student-peer and/or student-teacher interaction on the individual student's orientation to school and to society at large. We would argue that it is difficult to imagine the influence of non-interactional factors except as these mediate student interactional patterns, e.g., school architecture.

3. administrators assign teachers to specific positions within curriculum patterns;

4. administrators assess and promote the student evaluation system which includes both grading policy and the administration of standardized tests.

This list, of course, enumerates only a small part of an administrator's work tasks: for us its importance lies in the connection between it and the earlier list we presented of some of the common school activities of high school students ( see page. 55 ) Referring back to our earlier discussion, we noted that students were sorted into peer groups, assigned teachers, required to interact in a series of closed social systems, and evaluated concerning this interaction. It seems clear to us that the nature of student-student and student-teacher interaction issues in large measure from the directives and constraints imposed by school administration as these alter the structure of student activity. That is, in a major sense, activities on the common activity list of students owe much of their structure to work tasks of school administrators.

Let us now tie together the strands of our argument that administrators should regularly review student grouping practices. We have seen that the primary link between the administrator and the student is the former's structurally determined ability to influence the conditions of student interaction patterns. Student allocation and associated evaluation practices are clearly among the most important conditioners of these interaction patterns. They are also both practices in which the school administrator possesses an unusually great amount of discretion (witness the actions of a former School B principal in abolishing ability grouping). The organizational structure of schools which renders students largely powerless owes its semblance of rationality to the notion that administrators exhibit educational leadership in structuring student-student and student-teacher interactions. We believe that most administrators genuinely perceive service to students as primary to their job function and accordingly we feel that the review of student allocation programs should be considered as of the highest priority.

## Some Final Comments

There is an old saying which goes, "If you're so smart, how come you're not rich?" With respect to our discussion someone might add a similar query: "If student allocation is so important, how come it rarely receives systemmatic administrative review?" In other words, why is a policy gap so common in this area?

The answer here is both disingenuous and paradoxical. In one sense there has always been administrative review, while in another sense and one which is no less valid, administrative review was rarely possible. The first observation relates to the central function of school administrators which is to mediate between a variety of interest groups. As a natural result of this job function, school administrators tend to become politically sensitive to the needs and desires of system members. Their role becomes that of dealing with problems as they arise and are poised by specific interest groups. In order to act this part, it is clearly useful to establish as much good will with each interest group as is possible. In light of this, it is highly unusual for school administrators to raise potentially divisive issues on their own. To do so risks the expenditure of good will which may be of great importance with regard to other issues which cannot be anticipated and must be handled. An administrator's ability to do his job well requires that he stockpile good will: the eduational leadership of school administrators is limited by this condition and cannot occur effectively apart from it.

As a result, school administrators tend to oversee system functioning rather passively: they are available to system members to hear their grievances and to attempt to resolve them, *but* they do not generally seek to discover grievances, and even less do they seek to uncover dysfunctional situations which cannot be articulated by any interest group. Yet the latter sort of disorder is very likely to occur with respect to student allocation. If students are *routinely* misprocessed, in the sense discussed at the end of the previous chapter, they will not likely be aware of this *if* the processing appears to be normal and traditional. Few of us are acutely aware of the injustice of a life expectancy of less than 450 years: perceptions of injustice tend to be conditioned by perceptions of normalcy. Thus *school administrators generally do monitor internal allocation practices* in the sense that they are available to hear grievances concerning these. However, if staff is content with on-going practices and students believe such practices to be normal, this sort of administrative review offers little guarantee of effective and fair internal allocation.

Our claim, then, is that administrative review has tended to be informal, and for the special reasons discussed, inappropriate.

Moreover, as mentioned in Chapter I, it has been based on a psychological model. This leads us to consider circumstances which would allow for adequate administrative monitoring of internal student allocation. Such review was rarely possible until quite recently, since it minimally requires the computerization of school records. For an administrator to grasp the range of group compositions found in his school either he must have available to him the sorts of profiles we discussed in Chapter Two, or he must rely on the judgements of a variety of staff members. The former seems to us the only satisfactory solution in a large or middle-sized school system.

We believe that school administrators in the coming decade will use computerized student records routinely as a partial basis for educational decisions, and that the availability of this computerized data will expand the leadership role of the school administrator. The data will pose issues, if systematically organized, and these will frequently be sensitive,both sociologically and politically. Administrators will have to resolve these and, in doing so, they will exert leadership in areas where presently they exert only passive governance. Our major thesis with respect to the decision-making role of school administrators is just this: the increasing availability of computerized student records both allows and requires greater administrative centralization of decision-making in the area of student processing. As school record monitoring systems become instituted, student data will become an independent force -- and administrators will become major interpreters of this force.

# CHAPTER IV

## Some Correlates and Consequences of Allocation Decisions: Linking Students' Attitudes to School Records Data

We have seen that the social characteristics of the groups resulting from the allocation systems of the two schools in our study differed strikingly along several important dimensions that could be determined from existing school records. This, of course, was what we were led to expect from previous studies cited in our first chapter. There are, however, a number of additional ways in which the allocation systems of the schools might result in significantly different groups, but these are not ascertainable from existing school records. A cursory glimpse at the literature on adolescents in secondary schools during the past two decades reveals three major themes: (a) alienation, (b) problems associated with student culture, and (c) the relationships among self-image, aspiration, and achievement. Schools do not routinely collect information on these subjects that could be systematically linked with school records information. But as we shall attempt to demonstrate, it would not be difficult to monitor these and other important issues by means of periodic self-administered surveys.[1]

The purpose of this chapter is to answer the sometimes impertinent question, "So what?" that frequently results from the demonstration that groups created by school gouping procedures differ significantly in their social characteristics. Clearly when these differences involve highly visible characteristics such as race or sex, there is no need to raise the question of "So what?" because school administrators will already be well aware of these differences and some of the resulting problems with which they must contend. However, where these difficulties are less visible, there may be equally troublesome problems resulting, and school authorities might well gain from any insights they can be given as to the existence of and origins of such problems.

While it should be obvious that by sorting their adolescent clients into different bins the schools may well be creating mixes of students who are differentially predisposed toward certain styles of subculture or academic adaptation, we hasten to point out that we cannot ascertain causation in the analysis that follows. That is to say, while we will be demonstrating some rather fascinating differences among the student groups, we cannot say with certainty that any of these differences is attributable to the grouping procedures employed. Nevertheless, while we remain biased toward attempts at establishing causal links, we are confident that, as pragmatic men, school administrators will find differences in the orientations and expressions of different groups of students to be useful and interesting information even though they don't know their causes. By way of illustration, we found in an earlier study of eight New Jersey high schools that students and their parents who were associated with lower ability groups and non-college curricula had less favorable attitudes towards schools and teachers than their counterparts who were associated with higher ability groups and college preparatory curricula.[2] It is entirely possible that students and parents with these different orientations and responses were selectively recruited to different groups -- that some form of presocialization took place. It is equally possible that socialization and the formation of these attitudes took place largely within these different groups. But regardless of the origins of these attitudes, school administrators could see that they were contending with very different constituencies, and they could set their strategy accordingly.

---

[1] It is our contention that in order to insure privacy and relative objectivity, it would be desirable to leave the analysis of student - or staff or parent -- surveys to outside agencies. Even though outside agencies are used, the cost of these studies should remain minimal since the schools can collect the information and instruments can be precoded.

In the brief analysis of the survey data that follows, we have usually divided the students in each school into four groups. In School A, these are the three levels of college curriculum and the combined non-college group used in Chapter Two. We have excluded the nineteen non-black students in School A from this presentation except where noted. In School B we have distinguished the two major curriculum categories and the two racial group within each of these. The general topics to be covered are (1) orientation toward and responses to school, (2) racial factors, and (3) the relationship among academic performance, self-image and aspirations. Discussion of the first two topics will be limited to a few descriptive remarks. The reader can inspect the lengthy table at the end of the chapter if more detail is desired. The final topic is given more analytic treatment since it bears most directly on the traditional academic goals of education. The general intent of this analysis is to connect major concerns of sociologists of education with the student allocation systems of the two schools studied. Different input, throughput, and output variables could be used instead of the ones we have chosen, but the general analytic study would probably be very similar.

---

[2] Wilder, Friedman, et al., Actual and Perceived Consensus Between School and Community on Education Goals. op. cit.

## How the Students View the School and Education

Generally speaking the students in both schools studied appear to be very practical minded individuals who took school for granted without showing either high rates of enthusiasm or alienation, and these orientations did not vary consistently according to the allocation categories we have designated. Only about one in four students indicated they liked school very much during the spring of their senior year (School A 26% and School B 22%), and less than one out of five said they did not like school at all (School A 14%, and School B 19%.) Interest in schoolwork was somewhat higher in School A than School B (29% and 21% "very much interested," and 8% and 20% "not at all interested" for the respective schools.) In addition, slightly more students in School A than School B agreed that they enjoyed participating in most of their classes (75% and 65%), but few in either school strongly agreed with the statement. Thus neither liking school, interest in schoolwork, nor enjoying participating differed much according to race of students or curriculum group. However, students in School A less frequently liked their teachers very much (23% and 36%), and this difference is explained by race, with 40% of the whites and 21% of the blacks in School B giving this response. (Whether this difference is attributable to the fact that the vast majority of teachers in both schools were white is not ascertainable from our data.) But generally it appears that enthusiasm for school, for teachers, and for participation was not especially high or low at either school nor was it noticeably related to grouping procedures.

By way of contrast, assessment of the quality of education provided by their schools was found to be strongly related to both the racial characteristics and to group assignments of students in the two schools. Two questions were asked in an attempt to ascertain the quality of education that students felt they were offered by their schools; first, how their high school compared with others in the United States, and second, how it compared with the other high school in the community. Interestingly, a higher proportion of the students in School A than in School B indicated they thought their school was better than most in the U.S. (33% and 20%, respectively), and again this difference was closely linked to race with 30% of the blacks and 16% of the whites in School B choosing the "better than most" response. However, fewer students in School A than School B indicated they thought their school offered a better education than the other high school in the community (38% and 52%, respectively.) In both schools students in the College Preparatory curriculum or higher ability groups more frequently believed their school offered a better education than those in non-college or lower ability groups. But in School B black students consistently rated their school higher than whites in both curriculum groups. It appears from these findings that the comparative reference groups of the black and white students were not the same. Black students in both schools seemed to be indicating their awareness of being in a school that was better than the schools attended by most black students in the United States, and the whites seemed to be comparing their school with the white suburban schools with which they were most familiar. However, it is especially interesting that success within each school (as measured by high ability or curriculum group)enhanced local comparisons even though it did not affect national comparisons.

The tendency for the students in School A to give somewhat more favorable responses continues, with 53% strongly agreeing that they generally received fair treatment by the school, compared with 36% strongly agreeing in School B. These proportions were relatively unrelated to race or allocation groups within schools. However, fewer strongly agreed with the statement "Generally I have been given a fair chance to show what I can do at this high school" (10% and 12%, respectively), although combined agree and strongly agree proportions were somewhat higher at School A (77% and 65%, respectively).

Curiously, there was a slight tendency for those in the highest ability groups to agree somewhat less with this item, and this was most pronounced among the blacks in School B with just 44% agreeing.

Einstein has been widely attributed with having said that genius is largely a matter of hard work, but the question of what one has to do in order to succeed in school has seldom been asked of students. Yet judging from the responses of our sample, the more successful students placed less faith in hard work. Overall, somewhat more agreed in School A that "It only takes hard work to do well in school" (51% compared to 43%); but larger differences were found between allocation groups within each school, with students in lower curriculum and ability groups agreeing more. Consistent with this view, fewer students in School A agreed that "You don't have to do much work in order to graduate from this school as long as you keep out of trouble" (26% and 36%). However, while agreement with this item was higher among College Preparatory students and whites in School B, agreement levels were relatively similar among the ability groups in School A. More striking was the difference in level of agreement with the item "The main value of an education is to help a person find a better job." This ranged from 73% of the non-College Preparatory blacks in School A to 38% of the High College Preparatory group in School B. Similarly, a majority of students in both schools indicated that getting good grades was very important to them, but the proportion was considerably higher in School A than B (73% and 53%). In addition, the black students in School B reported they considered good grades to be more important than the white students indicated. The lowest grade that students said they would be satisfied with was rather similar in the two schools, with majorities settling on the gentlemanly C, but a higher proportion of students in School A claimed they tried harder to get good grades (53% "quite hard" or "very hard" in School A compared with 40% in School B). Curiously, self reports of the level of effort extended seem to be totally unrelated to level of letter grades actually earned in the groups we have designated.

Judging from the limited number of responses we have just presented, students in the two high schools in Transurbia tended to view their schools and education rather similarly. To be sure, assessments of the relative merits of the quality of education offered by the two schools differed in a provocative manner. But for the most part responses were moderate, conventional, and somewhat more favorable in predominantly black School A than in School B. Moreover, as we have just seen, students in School A placed more importance on getting good grades and claimed they tried harder to get them. These do not sound like the responses of alienated or militant students. But before giving the schools high grades for succeeding in creating a warm and receptive atmosphere for students, let us note responses to one more item, "Generally when I have a problem, I feel I can talk it out with somebody at the high school." At School A, only 32% chose either of the agree responses, and at School B, only 27% agreed. Perhaps most important, just 5% of the black non-college preparatory group at School B agreed with this item.

Turning briefly to the items that dealt more openly with racial issues, there was some tendency in both schools for students of each racial group to say they thought the other racial group was getting better treatment, but this was especially pronounced at School B. Only a minority of the black students at School B agreed that "Generally black students are treated fairly at the high school." But a majority of blacks in School B agreed that "In general, I have received fair treatment at this school." Majorities of both blacks and whites in both schools indicated they though whites were receiving fair treatment, and majorities of all groups except for College Preparatory blacks in School B agreed with the statement, "Generally, I have been given a fair chance to show what I can do at this school." From these responses, it would appear that only the blacks in School B showed significant signs of doubting that they were being treated fairly. The tendency for the whites and blacks to perceive racial situations differently in School B occurred again in response to the statement "Black militants are not very active at this school." Majorities of blacks agreed with this item at both schools, but just 30% of the whites at School B agreed. No doubt there is considerable disagreement between races as to what constitutes militancy, and this might well account for these responses, but we did not explore this question in our limited survey. Students were asked, however, to respond to the item, "When a group is denied fair treatment, its members have the right to obtain this even if doing so breaks the law." Blacks in the highest College Preparatory group at School A were the only group with a majority agreeing with this item. If this response can be interpreted as militant, it is especially interesting that this attitude should be most prominant among the most able blacks in the predominantly black school.

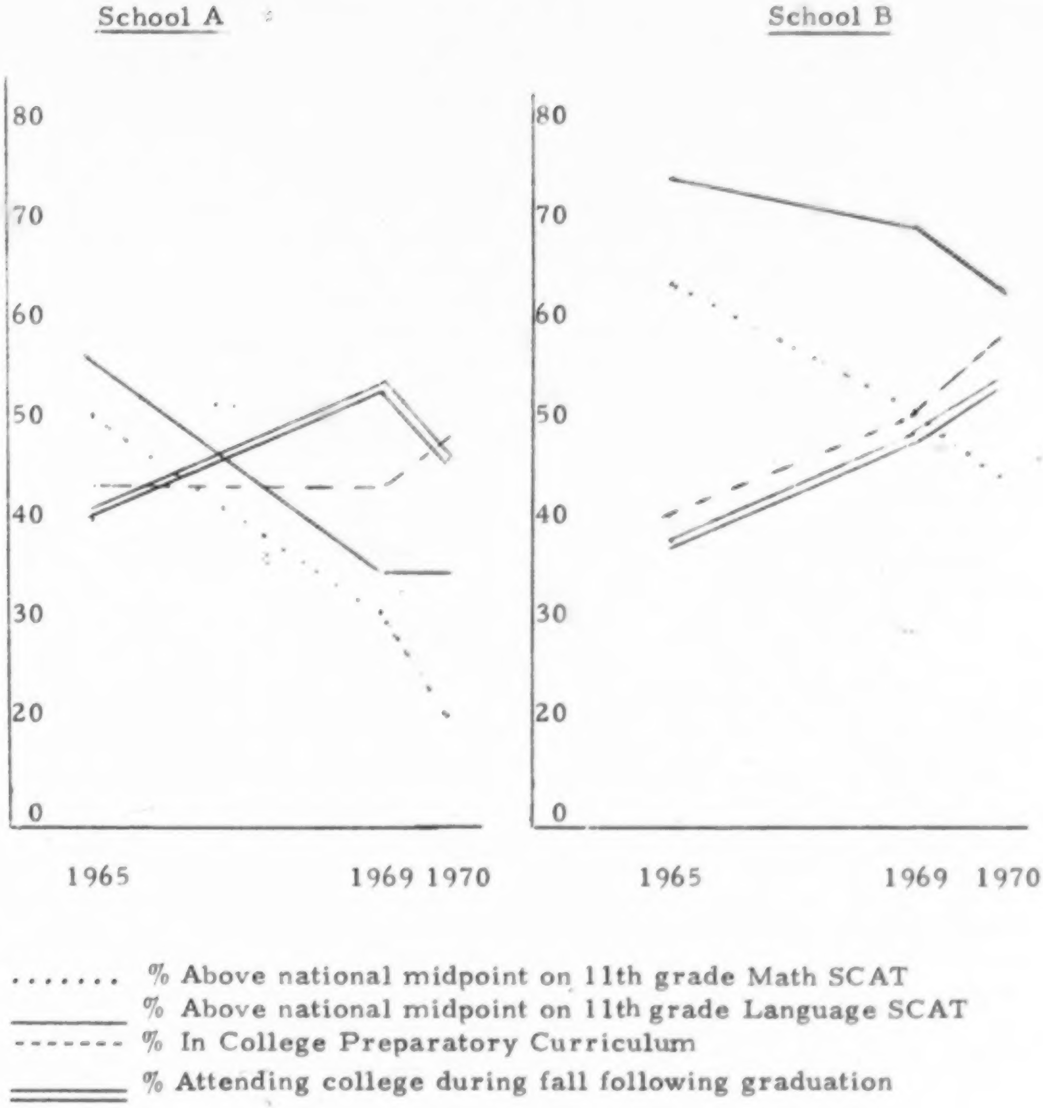
## Academic Performance, Self-Image and Aspirations

As we noted earlier, characteristics of both schools have changed markedly during recent years. In addition to the increases in the proportions of black students in both schools, the general middle class level of schools has been lowered somewhat. As might be expected, these changes are reflected by lower scores on standardized tests of ability, with the predominantly white school maintaining higher median scores on these measures (Table XIV). Curiously, however, the allocation systems appear not to have responded to the lower scores, but rather to have been mainly responsive to external input pressures and to increased opportunities for higher levels of education. The proportions of students in college preparatory curriculum classes have increased in both schools. The proportions of each class entering college in the fall following graduation have tended to keep pace with the increases in college preparatory enrollment, and these proportions are rather similar for both schools. The resulting patterns show both schools in 1965 with higher proportions of students scoring above the national midpoint on both SCAT tests than enroll in college preparatory curriculum or go on to college. But the classes of 1969 and 1970 in School A have considerably larger proportions of students who took college preparatory classes and went on to college than proportions who scored above the national norms on the SCAT tests. In School B the proportions scoring above national norms on the English SCAT tests have remained higher than the proportions in college curriculum and later attending college; but the Math test proportion is now lower. If the recent trend continues, the English scores will also be lower than college curriculum and attendance for School B. The fact that actual college enrollments have tended to keep pace with the increases in students enrolled in college preparatory curriculum undoubtedly reflects more liberal admissions policies of colleges and their search for black students, as well as higher expectation levels among students and their parents. However, as we shall see, these increases have also made it more difficult for the schools to define and distribute rewards effectively, especially among black students.

During recent years sociologists have become especially interested in studying the influence of school contexts on attitudes,

## TABLE XIV

## SELECTED CHARACTERISTICS OF SENIOR CLASSES IN TWO SAMPLE SCHOOLS FOR YEARS 1965, 1969, and 1970



orientations, and academic performance students. The impact of student cultures on the performance and orientations of students was the major topic of Coleman's high school study; [3] and a major, and much debated, conclusion of the mammoth study, Equality of Educational Opportunity, [4] was that the achievement of black students could be improved by integration with white students. Closely related are the studies of Alan Wilson demonstrating higher achievement and aspirations of working class students who attend predominantly middle class schools. [5] The many studies of student press in college tend to fit this model also. [6] A somewhat different approach is represented by James Davis' study showing that there is frequently a frogpond effect such that the students with rather high academic ability, as measured by standardized tests, will tend to get relatively low grades if they attend colleges with high standards, and their self-images and ambition are likely to suffer from comparisons with bright and high performing fellow students. [7] We will not address ourselves in this short report to the question of whether performance as measured by test scores is better or worse than might be expected according to some earlier independent measure of ability or potential but rather will confine ourselves to asking how academic self-image and educational plans relate to the allocation and letter grade reward systems in the two schools.

---

[3] James S. Coleman. The Adolescent Society. New York: The Free Press, 1961.

[4] James S. Coleman, et al., Equality of Educational Opportunity. Washington, D.C.: U.S. Government Printing Office, 1966.

[5] Alan B. Wilson, "Social Stratification and Academic Achievement," Education in Depressed Areas, A. H. Passow, ed. New York: Teachers College Press, 1963, and Alan B. Wilson, The Consequences of Segregation: Academic Achievement in a Northern Community, Berkeley: The Glendessary Press, 1969.

[6] See especially D. C. Thistlewaite, and N. Wheeler, "Effects of Teacher and Peer Subcultures Upon Student Aspiration," Journal of Educational Psychology, 1966, Vol. 57, pp. 35-47.

[7] James A. Davis, "The Campus As a Frogpond: An Application of the Theory of Relative Deprivation to Career Decisions of College Men," American Journal of Sociology, 1966, Vol. 72, pp. 1-16.

As we noted earlier, standardized test scores are typically used to aid decision making regarding the placement of students in track and curriculum groups. Hence one usually finds very strong relationships between placement, test scores, and letter grades at the high school level. Students, in turn, typically respond to their placement, letter grades, and test scores in terms of their self-images as students and their educational plans.[8] In order to see how these factors operate in our sample schools, we will examine the class of 1970 intensively since this is the only group for which we have survey data.

In both sample schools academic self-image of students is highly related to both letter grades and to standardized test scores in the relevant subject areas. (These figures can be found in Tables XV, XVI, and XVII.) Students who received A's or B's in eleventh grade English tend to perceive themselves as reading and writing better than students who received lower grades; and students who received A's and B's in eleventh grade mathematics tend to see themselves as doing mathematics better than those who received lower grades. In addition, students receiving higher grades in eleventh grade English and mathematics have higher SCAT scores in the relevant subjects. However, comparisons of the figures at the bases of Table XV – XVII reveal that School A awarded somewhat lower grades in English and somewhat higher grades in mathematics than School B.

Mathematics is especially interesting because large proportions of students no longer took mathematics at the eleventh grade level in both schools. Apparently as a reflection of the strict grading policy in math, students who did not take math in the eleventh grade tend to have a higher self-image of math ability than those taking math and receiving low grades, despite the generally higher aptitude for math among the latter group. Yet perhaps a more salient effect of

---

[8] David E. Wilder, *et al.*, *Actual and Perceived Consensus on Educational Goals Between School and Community*, Report to the U.S.O.E., New York: Bureau of Applied Social Research, Columbia University, 1968.

## TABLE XV

## ELEVENTH GRADE ENGLISH LETTER GRADES BY SELF IMAGE OF READING ABILITY AND AVERAGE LANGUAGE SCAT NATIONAL PERCENTILE LEVEL

### School A
### Eleventh Grade English Grades

| Reading Self Image* | A or B | C, D, or E | Total |
|---|---|---|---|
| Above Average | 47% | 27% | 34%<br>(66) |
| Average | 48% | 59% | 55%<br>(36) |
| Below Average | 5% | 14% | 11%<br>(24) |
| Total | 32% | 68% | 100% |
| $\overline{m}$ Language Scat Percentile | (60) | (38) | (45) |
| N= | 62 | 131 | 193 |

### School B
### Eleventh Grade English Grades

| Reading Self Image* | A or B | C, D, or E | Total |
|---|---|---|---|
| Above Average | 52% | 20% | 34%<br>(75) |
| Average | 40% | 69% | 57%<br>(48) |
| Below Average | 9% | 11% | 10%<br>(52) |
| Total | 44% | 56% | 100% |
| $\overline{m}$ Language Scat Percentile | (70) | (49) | (58) |
| N= | 58 | 74 | 132 |

*The closed response questionnaire item stated "How well would you say you can read for someone your age? Above Average, About Average, or Below Average."

## TABLE XVI

## ELEVENTH GRADE ENGLISH LETTER GRADES BY SELF IMAGE OF WRITING ABILITY AND AVERAGE LANGUAGE SCAT NATIONAL PERCENTILE LEVEL

### School A
### Eleventh Grade English Grades

| Writing Self Image* | A or B | C, D, or E | Total |
|---|---|---|---|
| Above Average | 42% | 21% | 28%<br>(60) |
| About Average | 48% | 63% | 58%<br>(39) |
| Below Average | 10% | 16% | 14%<br>(38) |
| Total | 32% | 68% | 100% |
| $\overline{m}$ Language Scat Percentile | (60) | (38) | (45) |
| N= | 60 | 128 | 188 |

### School B
### Eleventh Grade English Grades

| Writing Self Image* | A or B | C, D, or E | Total |
|---|---|---|---|
| Above Average | 41% | 7% | 22%<br>(76) |
| About Average | 53% | 77% | 67%<br>(55) |
| Below Average | 5% | 16% | 11%<br>(42) |
| Total | 44% | 56% | 100% |
| $\overline{m}$ Language Scat Percentile | (70) | (49) | (58) |
| N= | 58 | 74 | 132 |

*"How well would you say you can write compositions for someone your age? Above Average, About Average, Below Average."

## TABLE XVII

## ELEVENTH GRADE MATHEMATICS LETTER GRADES BY SELF IMAGE OF MATHEMATICS ABILITY AND AVERAGE MATH SCAT NATIONAL PERCENTILE LEVEL

### School A
### Eleventh Grade Math Grades

| Math Self Image* | A or B | C, D, or E | No Math | Total |
|---|---|---|---|---|
| Above Average | 41% | 14% | 22% | 22%<br>(48) |
| Average | 48% | 54% | 61% | 55%<br>(34) |
| Below Average | 11% | 32% | 17% | 23%<br>(25) |
| Total | 21% | 48% | 31% | 100% |
| $\overline{m}$ Math Scat Percentile | (45) | (36) | (26) | (35) |
| N= | 44 | 100 | 64 | 208 |

### School B
### Eleventh Grade Math Grades

| Math Self Image* | A or B | C, D, or E | No Math | Total |
|---|---|---|---|---|
| Above Average | 35% | 7% | 8% | 11%<br>(67) |
| Average | 59% | 46% | 50% | 49%<br>(48) |
| Below Average | 6% | 47% | 42% | 40%<br>(40) |
| Total | 13% | 42% | 45% | 100% |
| $\overline{m}$ Math Scat Percentile | (70) | (51) | (41) | (49) |
| N= | 17 | 57 | 62 | 136 |

*The closed response questionnaire item stated, "How well would you say you can do math for someone your age? Above Average, About Average, or Below Average."

context on math self-image is revealed by comparison between schools. For example, we find students receiving low grades in math in School B had lower self-images in this area than the high graded students in School A, whose aptitude scores they exceeded.

Continuing our examination of school context on self-image, in the rightmost columns of Table XV we find that the proportions of students believing they read above average, average, and below average are almost identical in the two schools even though the standardized test scores are demonstrably higher in School B. Self image of writing is somewhat more heterogeneous in School A than School B (Table XVI). But self image of mathematics performance is clearly higher in School A than in School B even though math aptitude scores are higher in School B. Thus a frogpond effect appears to operate as evidenced by the fact that student self images respond in a predictable manner to the rewards assigned by teachers in particular subjects in both schools, even though subject ability levels are vastly different according to national norms. Moreover, within School A (and, to a lesser extent, School B), there appears to be a frogpond within the frogpond. That is, while students not taking math have lower scores than those taking math, they have higher self-image of performance than those who took math and received low grades.

The difference between the racial composition of the two schools raises the obvious question whether academic self image, letter grades and test scores vary appreciably by race within each school. These figures are summarized in Table XVIII. The somewhat higher socio-economic circumstances of the white students in both schools are reflected by their higher standardized test scores and letter grades (class rank), but academic self-image does not reflect these differences in both schools. In School A there are no appreciable differences between the academic self images of blacks and white, but in School B self perception of reading and writing ability is somewhat lower among the blacks.

Responses to the three academic self image questions suggest that the frogpond effects found in Tables XV, XVI, and XVII are not working uniformly for blacks and whites. There is some evidence that the minority blacks in School B may have slightly lowered self images as a result of comparisons with a majority white group that performs higher academically; but the majority blacks in School A

## TABLE XVIII

## SELECTED CHARACTERISTICS AND RESPONSES OF BLACK AND WHITE STUDENTS WITHIN A PREDOMINANTLY BLACK AND A PREDOMINANTLY WHITE HIGH SCHOOL

| | | School A | | School B | |
|---|---|---|---|---|---|
| | | Black | White* | Black | White |
| Average 11th Grade National Language Scat Percentile | | 43% | 54% | 46% | 60% |
| Average 11th Grade National Math Scat Percentile | | 33 | 54 | 38 | 52 |
| Percent in Top 40% of Class | | 35 | 70 | 21 | 45 |
| Say they read: | Above Average | 30 | 26 | 18 | 34 |
| | Average | 55 | 68 | 66 | 54 |
| | Below Average | 12 | 5 | 11 | 10 |
| Say they write: | Above Average | 23 | 25 | 14 | 25 |
| | Average | 60 | 50 | 65 | 65 |
| | Below Average | 16 | 25 | 20 | 10 |
| Say they do math: | Above Average | 21 | 21 | 8 | 13 |
| | Average | 57 | 63 | 47 | 47 |
| | Below Average | 22 | 16 | 42 | 37 |
| Proportion Enrolled in College Preparatory Curriculum | | 61 | 57 | 50 | 67 |
| Expect to Complete Four or More Years of College** | | 60 | 42 | 61 | 50 |
| N*** | | 255 | 19 | 38 | 127 |

*This group includes four oriental students

**"How far do you really think you will go in school?"

***The N varies slightly for some items

show no evidence of comparing themselves with their minority white classmates. What appears to be happening is that black and white students tend to use racial groups as comparative reference groups in assessing their own academic performance levels. Hence even though the small group of whites in School A score high on tests and receive unusually high grades, they do not permit these to inflate academic self-image relative to their white peers in School B. Nevertheless, the black minority in School B does have consistently lower academic self image than the majority black students in School A. To this extent they appear to suffer from being unable to avoid comparisons with the majority of whites in their school.

Curiously, the allocation systems of the two schools and the educational expectations of students do not reflect the above difference. The proportions of black and white students in college preparatory curriculum in School A are almost identical, but there is a considerably larger proportion of white students than black in the college preparatory curriculum in School B. However, the proportions of black students expecting to complete four or more years of college is larger among black than white students in both schools. Clearly the relationships between the throughput (student allocation) and outputs (educational expectations) cannot be similar for whites and blacks in view of these figures. It also follows that, since the allocation of letter grades favors the whites in both schools, while college expectations are higher among the blacks, the letter grades relate somewhat differently to educational plans than is usually found to be the case.

Examining the combined relationships among letter grades (class rank), curriculum, and educational expectations within the two schools, (Table XIX), we find that curriculum is very highly related to college plans in both sample schools. Large majorities enrolled in College Preparatory curriculum in both schools expect to complete four years of college . However, non-college curriculum students who expect to complete four years of college are far more characteristic of the majority black school. Moreover, class rank appears to have significant impact on educational expectations only among the college preparatory students in the majority white school. Both these findings support our earlier contention that schools are having difficulty getting black students to accept traditional definitions of academic rewards and of academic potential.

## TABLE XIX

## PROPORTION OF SENIORS EXPECTING TO COMPLETE FOUR OR MORE YEARS OF COLLEGE BY CURRICULUM AND CLASS RANK IN TWO HIGH SCHOOLS

### School A

| | College Preparatory | | Not College Preparatory | |
|---|---|---|---|---|
| | Rank | | Rank | |
| | Top 40% | Bottom 60% | Top 40% | Bottom 60% |
| | 73% | 66% | 41% | 36% |
| N | (83) | (65) | (27) | (47) |

### School B

| | College Preparatory | | Not College Preparatory | |
|---|---|---|---|---|
| | Top 40% | Bottom 60% | Top 40% | Bottom 60% |
| | 79% | 67% | 18% | 14% |
| N | (47) | (48) | (17) | (37) |

## TABLE XX

## PROPORTION PLANNING TO COMPLETE FOUR YEARS OF COLLEGE BY CURRICULUM, RACE AND SCHOOL

### School A

| College Preparatory | | Non-College Preparatory | |
|---|---|---|---|
| Blacks | Whites | Blacks | Whites |
| 73% | 67% | 35% | -- |
| (151) | (9) | (68) | (6) |

### School B

| College Preparatory | | Non-College Preparatory | |
|---|---|---|---|
| Blacks | Whites | Blacks | Whites |
| 83% | 68% | 44% | 7% |
| (18) | (81) | (18) | (41) |

### TABLE XXI

### PROPORTION OF BLACK STUDENTS IN SCHOOL A PLANNING TO COMPLETE FOUR YEARS OF COLLEGE BY 12TH GRADE ENGLISH TRACK AND CLASS RANK

| Upper College Preparatory | | Middle College Preparatory | |
|---|---|---|---|
| Top 40% | Bottom 60% | Top 40% | Bottom 60% |
| 81% | 64% | 77% | 56% |
| (36) | (11) | (26) | (16) |

| Lower College Preparatory | | Non-College Preparatory | |
|---|---|---|---|
| Top 40% | Bottom 60% | Top 40% | Bottom 60% |
| 60% | 74% | 52% | 36% |
| (15) | (35) | (21) | (47) |

It is possible to look at these relationships in somewhat more detail despite the number of cases because of their lack of ambiguity (Table XX). We find, for example, that although a majority of the small group of white students in College Preparatory classes in School A expect to complete four years of college, not one of the non-College Preparatory white students expects to complete college. Similarly, in the majority white school, just three out of forty-one white students (7%) in non-College Preparatory classes expect to complete college, while eight out of eighteen (44%) of the black students in non-college preparatory classes have high expectations. Once again we find that only the white students appear to accept curriculum definitions set within the system.

A further elaboration of this finding of diminished school influence on the college plans of black students is found by looking more closely at the internal allocation system of the predominantly black School A which practices ability grouping in English and Math. To do this we shall consider the college plans of the black seniors as these are a function of curriculum and 12th grade English track placement as well as class rank. For this purpose, the College Preparatory curriculum will be split into an upper, middle, and low group according to the English class placement, while the various non-College Preparatory English groups will be treated together (Table XXI). By doing this we discover that class rank is positively related to college plans in all but the lowest College Preparatory section, where it shows a negative relationship! That is, students in the Low College Preparatory English group aspire to college irrespective of their class rank; for them the reward structure of the school, its grading system, has no discernible impact in this crucial regard. We saw in Chapter II that the Low College Preparatory section students are low in ability (as measured by standardized aptitude tests) and socio-economic status (as assessed by fathers occupation) relative to the other College Preparatory sections and even to some of the non-College Preparatory sections. Thus when we focus more closely on the internal allocation system of School A, we find that the traditional reward structure of the school is accepted least by those students in the College Preparatory program who would have most likely been denied access to College Preparatory curriculum a few years ago.

To review our findings, we noted that our two high schools were receiving very different student inputs in terms of racial characteristics and scholastic aptitude as measured by standardized tests. Standardized test scores had dropped rapidly during recent years in both schools, but proportions of students enrolled in College Preparatory curriculum and going on to college were roughly equivalent for the schools and increasing somewhat. From these figures we concluded that internal allocations and outputs of the school were more responsive to general secular trends toward higher levels of education and toward encouraging college attendance among blacks than to academic ability of students. Moreover, we found that relatively high proportions of black students expected to complete four or more years of college even among those not enrolled in College Preparatory classes and receiving low grades. Our interpretation of these findings was that traditional definitions and rewards of high schools were not being accepted by black students who saw opportunities for college despite rather poor academic records. In short, we found a frogpond effect such that high academic self-image and high educational expectations combined with low performance levels among blacks; and these were supported by relative isolation from large numbers of high performing students and by open admissions policies of colleges. Black students in the majority white school displayed somewhat lower academic self-image but had equally high educational expectations.

As might be expected, these circumstances have created problems among school staff, particularly among those interested in maintaining traditional academic orientations. Many instances of related strain were forthcoming in staff interviews, but perhaps none more striking than the teacher who complained that when students were threatened with lower grades for incomplete or poor quality assignments, they would now accept the lower grade rather than doing the extra work, confident that they would have relatively little difficulty getting into college with lower grades. In short, teachers complained that the high school was no longer able to exercise social control over students through the use of academic sanctions.

Students may be correct in their assessment of their situation, judging from the high proportions of students attending college from the senior classes we have studied. If, however, success at college is at all related to performance levels in high school, then the high school is merely engaging in a holding operation of "deferred failure," and it will be left to the colleges to "cool out"[9] large numbers of those they accept. There is already considerable evidence of new student allocation systems emerging at the college level to accommodate lower levels of academic performance. It remains to be seen whether these changes at the college level will be readily accepted by large numbers of black students and whether graduates of such programs will fare well in the job market.

## CONCLUSIONS

How do our findings relate to decision-making among school administrators? It is patently obvious that the allocation system in the schools we have studied have been unencumbered by any rational planning or decision-making by administrators during recent years. The schools we have studied appear to fit a primitive supply and demand model; the black students currently have a seller's market over which the high school has no effective control. White students, in contrast, seem to continue to accept the older market definition. In effect, the high schools are trying to process students uniformly but find themselves offering two different products for which different standards are applied by the consumers.

In the aftermath of reactions to his study Equality of Educational Opportunity, Coleman wrote a provocative article on the "Concept of Educational Opportunity,"[10] in which he maintained that a performance standard for equality of educational opportunity was now being applied such that the difference in achievement at grade 12 between the average black and white is the degree of inequality of educational opportunity; and the reduction of that inequality is the responsibility of the school. Our findings suggest an alternative college admissions standard, the proportion of students admitted to and completing various levels of higher education. According to Coleman's performance standard, the schools in our study do not provide equal opportunity for blacks, but according to our college admissions standards, they may not provide equal opportunities for whites. Many would argue that college admissions are far more important now and performance levels will follow in time. But it may well be that differences in employment opportunities will outweigh both of these in the long run.

---

[9] For a discussion of the California junior colleges from this perspective, see Burton Clark, "The 'Cooling Out' Function of Higher Education," in Halsey, Floud and Anderson, op. cit., pp. 513-523.

[10] James S. Coleman, "The Concept of Equality of Educational Opportunity," in Harvard Education Review, Equal Educational Opportunity. Cambridge, Mass.: Harvard University Press, 1969, pp. 9-24.

It is obvious that the schools we have studied have been unable to perform their socializing function adequately with black students. Traditional norms and definitions of academic performance and potential have been rejected, modified, or ignored by large proportions of blacks who respond to the fact that colleges are admitting students with undistinguished academic records. This, in turn, short circuits the capacity of the schools to control student behavior by using academic sanctions. These shifts in their academic market situation perceived by black students illustrate how the informal organizational aspects of schools -- particularly student attitudes and expectations -- are especially responsive to external stimuli or environmental changes. In this regard, schools display open systems characteristics. However, the formal organization of the school, as represented by the student allocation procedures, displays system maintenance attributes more characteristic of closed systems. Most bureaucratic organizations exhibit this type of resistance to changes in their environments at the formal organizational level combined with adaptive responses at the informal organizational level.

As we have noted earlier with the case of Washington, D. C., there are some times when formal organizational changes are made in response to environmental pressures; and during recent years allocation systems within and between schools have been the subject of much controversy as a direct result of racial integration. School administrators are especially vulnerable to pressures to change the formal aspects of grouping when large proportions of their students are black. Most of the external system, and particularly the colleges, continue to rely heavily upon standardized test scores and academic performance records such as class rankings as criteria for allocation within and between schools. At the same time, the recent demands for school accountability have laid great stress on standardized test scores. Schools have been largely unsuccessful in producing higher standardized test scores among working class black students, but secondary schools may be able to reduce conflicts that result from failure to achieve high performance by shifting attention to college admissions. However, colleges often use standardized test scores differently for whites and blacks and will frequently admit blacks with lower test scores. The double standard of college admissions with regard to disadvantaged groups, which in many instances are largely black, may well serve to increase tensions between the races within schools in addition to short circuiting the ability of the schools to use academic sanctions with blacks. Thus secondary schools with racially mixed student bodies are faced with special problems in determining how to group, evaluate, and reward students.

Throughout this study we have stressed the point that in order to make rational decisions about student allocation decisions, school administrators must have longitudinal data on students that link the school careers of individuals with their behavior at later points in time. If black students with low standardized test scores in non-College Preparatory courses fare poorly in college,[11] it would behoove administrators to be the ones to first make this known throughout their own systems (regardless of whether they wish to maintain old standards). However, if these students do well in college, then the allocation and reward system of the high school is not serving its avowed purpose, and the schools should search for alternatives. Under any circumstances, our data suggest that school administrators should reexamine student allocation processes within their school systems with the aim of better understanding their effects. If the cost of rapidly changing "environment for output" on a traditional allocation and reward system is to severely diminish school influence on students, schools systems may wish to reexamine their grouping and grading procedures.

---

[11] According to Stanley, they do fare poorly. Julian C. Stanley, "Predicting College Success of the Educationally Disadvantaged." Science, 171 (February, 19, 1971), 640-647.

# TABLE XXII

## SELECTED RESPONSES TO QUESTIONNAIRE ITEMS BY SCHOOL, ACADEMIC GROUP, AND RACE

| | School A (Blacks) | | | | | School B | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CP | | Other | | |
| | HiCP | MidCP | LoCP | Other | Total | White | Black | White | Black | Total |
| Generally, how much do you like school this year? | | | | | | | | | | |
| % Very much | 25 | 22 | 27 | 28 | 26 | 21 | 28 | 24 | 16 | 22 |
| % Not at all | 15 | 9 | 16 | 16 | 14 | 17 | 22 | 24 | 16 | 19 |
| How interested would you say you are in most of your schoolwork? | | | | | | | | | | |
| % Very much interested | 25 | 22 | 29 | 34 | 29 | 17 | 17 | 29 | 21 | 21 |
| % Not at all interested | 10 | 15 | 4 | 7 | 8 | 26 | 17 | 17 | 5 | 20 |
| Generally I enjoy participating in most of my classes this year | | | | | | | | | | |
| % Agree strongly + Agree | 68 | 74 | 77 | 78 | 75 | 66 | 67 | 63 | 63 | 65 |
| How much do you like your teachers generally? | | | | | | | | | | |
| % Very much | 33 | 15 | 21 | 25 | 23 | 40 | 22 | 41 | 21 | 36 |

## TABLE XXII (Continued)

| | School A (Blacks) | | | | | School B | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CP | | Other | | |
| | HiCP | MidCP | LoCP | Other | Total | White | Black | White | Black | Total |
| As far as giving a good education is concerned, compared with other schools in the U.S. do you think your high school is: | | | | | | | | | | |
| % Better than most | 30 | 24 | 33 | 38 | 33 | 14 | 33 | 22 | 26 | 20 |
| As far as giving a good education is concerned, compared with the other public high school in Transurbia, do you think your high school is: | | | | | | | | | | |
| % Better | 52 | 41 | 39 | 30 | 38 | 58 | 67 | 37 | 47 | 52 |
| In general I have received fair treatment at this high school. | | | | | | | | | | |
| % Agree strongly + Agree | 64 | 74 | 66 | 72 | 69 | 77 | 55 | 68 | 53 | 65 |
| Generally I have been given a fair chance to show what I can do at this school | | | | | | | | | | |
| % Agree strongly | 15 | 9 | 7 | 10 | 10 | 14 | 6 | 10 | 16 | 12 |
| % Agree | 62 | 70 | 64 | 70 | 67 | 51 | 39 | 61 | 58 | 53 |

TABLE XXII(Continued)

| | School A (Blacks) | | | | | School B | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CP | | Other | | |
| | HiCP | MidCP | LoCP | Other | Total | White | Black | White | Black | Total |
| It only takes hard work to do well in school | | | | | | | | | | |
| % Agree Strongly & Agree | 37 | 52 | 58 | 53 | 52 | 33 | 44 | 54 | 63 | 44 |
| You don't have to do much hard work to graduate from this school as long as you keep out of trouble | | | | | | | | | | |
| % Agree Strongly & Agree | 32 | 26 | 22 | 25 | 26 | 47 | 28 | 27 | 16 | 36 |
| The main value of an education is to help a person find a better job | | | | | | | | | | |
| % Agree Strongly & Agree | 42 | 52 | 63 | 73 | 62 | 38 | 61 | 49 | 53 | 46 |
| How important would you say getting good grades is to you? | | | | | | | | | | |
| % Very important | 55 | 78 | 73 | 78 | 73 | 47 | 67 | 54 | 63 | 53 |
| Generally, what is the lowest grade that you would really be satisfied with? | | | | | | | | | | |
| % C or lower | 43 | 76 | 86 | 88 | 77 | 68 | 67 | 80 | 89 | |

## TABLE XXII (Continued)

| | School A(Blacks) | | | | | School B | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CP | | Other | | |
| In general, how hard do you try to get good grades? | HiCP | MidCP | LoCP | Other | Total | White | Black | White | Black | Total |
| % Very or quite hard | 52 | 61 | 48 | 52 | 53 | 36 | 50 | 51 | 26 | 40 |
| Generally, when I have a problem I fell I can talk it out with somebody at the high school. | | | | | | | | | | |
| % Agree Atrongly & Agree | 25 | 33 | 34 | 33 | 32 | 28 | 33 | 32 | 5 | 27 |
| Generally Black students are treated fairly at the high school | | | | | | | | | | |
| % Agree Strongly & Agree | 81 | 83 | 70 | 76 | 74 | 71 | 33 | 92 | 45 | 75 |
| Black militants are not very active in this school | | | | | | | | | | |
| % Agree strongly & Agree | 48 | 76 | 56 | 52 | 57 | 35 | 56 | 22 | 84 | 40 |
| When a group is denied fair treatment, its members have the right to obtain this even if doing so breaks the law | | | | | | | | | | |
| % Agree strongly & Agree | 55 | 37 | 34 | 19 | 33 | 27 | 33 | 24 | 47 | 29 |
| N = | (47) | (54) | (50) | (68) | (219) | (81) | (18) | (41) | (18) | (158) |

97

## BIBLIOGRAPHY

Barton, Allen H., and Wilder, David E. "Research and Practice in the Teaching of Reading: A Progress Report," in Mathew B. Miles, ed., Innovation in Education, New York: Teachers College Press, 1964, pp. 361-98.

Berg, Ivar E. Education and Jobs: The Great Training Robbery, New York: Praeger, 1970.

Blau, Peter M. The Dynamics of Bureaucracy, Revised Edition. Chicago: The University of Chicago Press, 1963.

Bloom, Benjamin S., Hastings, J. T., and Madaus, C. F. Handbook of Formative and Summative Evaluation of Student Learning, New York: McGraw-Hill, 1971.

Brookover, Wilbur B., and Gottlieb, David. A Sociology of Education, New York: American Book Company, 1964.

Charters, W. W., Jr. "Social Class and Intelligence Tests," in W. W. Charters, Jr., and N. L. Gage, eds. Readings in the Social Psychology of Education, Boston: Allyn and Bacon, 1963, pp. 12-21.

Cicourel, Aaron V., and Kitsuse, John I. The Educational Decision-Makers, New York: Bobbs-Merrill, 1963.

Clark, Burton. "The 'Cooling-Out' Function of Higher Education," in A. H. Halsey, J. Floud, and C. A. Anderson. Education, Economy and Society, Glencoe, Illinois: The Free Press, 1961, pp. 513-523.

Coleman, James S. The Adolescent Society, Glencoe, Illinois: The Free Press, 1961.

Coleman, James S., et al. Equality of Educational Opportunity, U. S. Department of Health, Education and Welfare, 1966.

Coleman, James S., "The Concept of Equality of Educational Opportunity," in Harvard Educational Review, eds. Equal Educational Opportunity, Cambridge, Mass.: Harvard University Press, 1969, pp. 9-24.

Conant, James B. The American High School Today, New York: McGraw-Hill, 1959.

Conant, James B. The Comprehensive High School, New York: McGraw-Hill Paperbacks, 1967.

Curti, Merle. The Social Ideas of American Educators. Totowa, Littlefield, Adams, & Co., 1966.

Cremin, Lawrence A. The Transformation of the School: Progressivism in American Education, 1876-1957, New York: Alfred Knopf, 1961.

Davis, Allison, Gardner, Burleigh B., and Gardner, Mary R. Deep South, Chicago: University of Chicago Press, 1941.

Davis, Allison. Social Class Influence on Learning, Cambridge, Mass: Harvard University Press, 1948.

Davis, James A. "The Campus as a Frogpond: An Application of the Theory of Relative Deprivation to Career Decisions of College Men." American Journal of Sociology, 1966, Vol. 72, pp. 1-16.

Dewey, John. Democracy and Education, New York, 1931.

Drost, Walter H. David Snedden and Education for Social Efficiency, Madison: The University of Wisconsin Press, 1967.

Durkheim, Emile. Education and Sociology, Translated by Sherwood D. Fox. New York: The Free Press, 1956.

Flanagan, J.C., et al. The American High School Student, Pittsburgh, Pa: Project Talent Office, 1964.

Goldberg, Miriam L., Passow, A. Harry, and Justman, Joseph. The Effects of Ability Grouping, New York: Teachers College Press, 1966.

Goldthorpe, John H. "Social Stratification in Industrial Society," in Bendix, R. and Lipset, S., eds. Class, Status and Power, Second Edition. Glencoe, Illinois: The Free Press, 1966.

Hansen, Carl F. The Four-Track Curriculum in Today's High Schools, Englewood Cliffs, New Jersey: Prentice-Hall, 1964.

Holley, Charles Elmer. The Fifteenth Yearbook of the National Society for the Study of Education, Part II: The Relationship Between Persistence in School and Home Conditions, Chicago: University of Chicago Press, 1916.

Hyman, Herbert H. Survey Design and Analysis, The Free Press, Glencoe, 1955.

Jensen, Arthur R. "How Much Can We Boost I.Q. and Scholastic Achievement?" Harvard Educational Review, Vol. 29, No. 1 (Winter, 1969), pp. 1-123.

Katzman, Martin T. and Rosen, Ronald S. "The Science and Politics of National Educational Assessment." The Record, New York: Teachers College Press, Vol. 71, No. 4 (May, 1970), pp. 571-86.

Kuhn, Thomas. The Structure of Scientific Revolutions, Chicago University of Chicago Press, 1970.

Lynd, Robert S. and Helen M. Middletown: A Study in American Culture, New York: Harcourt Brace, 1929.

Mann, Dale. "Administrator/Community/School Relationships in New York State." Report submitted to the New York State Commission on the Quality, Cost and Financing of Elementary and Secondary Education. New York, 1971.

Mann, Dale. Conceptual Framework, New York: Program for Situational Analysis, Teachers College, Columbia University, 1969.

Passow, A. Harry. Toward Creating a Model Urban School System: A Study of the Washington, D.C. Public Schools, New York: Teachers College Press, 1967.

Plato, The Republic, Translated by Francis MacDonald Cornford. New York: Oxford University Press, 1945.

Rogoff, Natalie. "Local Social Structure and Educational Selection," in A.H. Halsey, Jean Floud, and C. Arnold Anderson, eds. Education, Economy, and Society, New York: The Free Press, 1961, pp. 241-51.

Russell Sage Foundation, eds. Guidelines for the Collection, Maintenance and Dissemination of Pupil Records, New York: Russell Sage Foundation, 1970.

Sizer, Theodore R. "Testing: Americans Comfortable Panacea." Proceedings of the 1970 Invitational Conference on Testing Problems, Princeton, New Jersey: Educational Testing Service, 1971.

Spargo, John. The Bitter Cry of Children, Chicago: Quadrangle, 1968. Originally published by MacMillan and Co., 1906.

Stanley, Julien C. "Predicting College Success of the Educationally Disadvantaged," Science, 171, (February 19, 1971), 640-647.

Thistlewaite, D. C., and Wheeler, N. "Effects of Teacher and Peer Subcultures Upon Student Aspirations." Journal of Educational Psychology, 1966, Vol. 57, pp. 35-47.

Waller, Willard. The Sociology of Teaching, New York: John Wiley and Sons, 1934.

Warner, W. Lloyd, and Lunt, Paul S. The Social Life of an American Community, New Haven: Yale University Press, 1941.

Warner, W. Lloyd, Havighurst, Robert J., and Loeb, Martin B. Who Shall be Educated? New York: Harper and Bros., 1944.

Warner, W. Lloyd, and Bailey, Wilfred C. Democracy in America, New York: Harper and Bros., 1949.

Weber, Max. From Max Weber: Essays in Sociology, Translated by H. H. Gerth and C. Wright Mills. New York: Oxford University Press, 1958.

Whipple, Guy M., ed. The Fifteenth Yearbook of the National Society for the Study of Education, Part I, Standards and Tests for the Measurement of the Efficiency of Schools and School Systems, Chicago: The University of Chicago Press, 1916.

Whipple, Guy M., ed., The Thirty-Fifth Yearbook of the National Society for the Study of Education, Part I, The Grouping of Pupils, Bloomington, Indiana: Public School Publishing Company, 1936.

Wilder, David E., Friedman, Nathalie S., Hill, Robert F., Sandis, Eva, and Sieber, Sam D. Actual and Perceived Consensus on Educational Goals Between School and Community, New York: Columbia University Bureau of Applied Social Research, 1968 (2 vols.).

Wilson, Alan B. "Residential Segregation of Social Classes and Aspiration of High School Boys." American Sociological Review, Vol. 24, 1959, pp. 836-45.

Wilson, Alan B. The Consequences of Segregation: Academic Achievement in a Northern Community, Berkeley: The Glendessary Press, 1969.

Wilson, Alan B. "Social Stratification and Academic Achievement." Education in Depressed Areas, A. H. Passow, ed. New York: Teachers College Press, 1963.

Wolfle, Dael. American Resources of Specialized Talent, New York: Harper and Bros., 1954.

# APPENDIX A

## Study Design and Fieldwork

The organization of this project has been complex and the direction of the work has shifted in several ways from the writing of the proposal to the completion of this report. This chronicle traces the relationship between study design and implementation, emphasizing the affects of field conditions. We shall focus here on the work activities of the researchers with only occasional reference to the intellectual, substantive development of this work. For this, the reader is invited to search the preceeding report.

### Some Perspectives

One way of explaining the genesis of a research study is to examine its origins from the points-of-view of different key participants. At least four perspectives have had influence on the manner in which the research was conducted and the form in which this final report has been cast. These perspectives are provided by the funding agency, the principal investigator, the project associate, and the cooperating school district.

### The Funding Agency

The Program for Educational Leadership (PEL), which funded this research, was established with Federal funds with a mandate to recruit social-action oriented individuals into educational administration and to offer them training in the social sciences in addition to conventional graduate work in educational administration. An innovative program, PEL promoted this research as part of its efforts to develop social science-oriented curriculum materials suitable for training educational administrators. This research and curriculum development was known as The Program for Situational Analyses (PSA), a component of PEL.

From the point of view of the PEL leadership, the fruit of this research was to be a monograph that could serve as curriculum material together with other monographs from research teams involved in separate projects, each with different disciplinary orientations. To insure that the various project reports would be compatible, PSA urged the research teams to employ a general systems theoretical model which it disseminated to them in several ways. The research projects were funded in August, 1969: in the academic year prior to this date, PSA had employed representatives of several social science fields to interpret the literature in their field concerning school system decision-making in terms of the general systems model as it would relate to a prototype school district. As they became available, these reports were distributed to the research teams together with a statement of the principal organizing tenets of general systems theory compiled by the original PSA Coordinator, Dale Mann.[1] The PEL leadership intended to adapt a hands-off policy towards the projects themselves and thus depended largely on the influence of the various conceptual frameworks to unite the end product monographs.

The prominence given in this report to the organization of information systems and their relationship to the decision-making apparatus of the school system reflects original PSA concerns with general systems theory and decision-making. It is, however, a truism in social science research that the original objectives of a research project from the points-of-view of the researchers as well as those of the funding agency personnel become distorted in the doing of the work itself.[2] Several factors attenuated the influence of the general systems approach in this monograph. Neither of the principal researchers were greatly familiar with this theoretical schema prior to their involvement in this work so that it was difficult for them to translate their familiar theoretical models into this framework. The difficulty was compounded by the late availability of the sociological conceptual framework and by staff turnover within PSA which increased the pressure on them to proceed on their own initiative. As a result of these several factors, this report embodies less of a general systems model than had originally been intended both by the researchers and the funding agency. The perspective of PSA is most evident in the structuring of this report as curriculum material.

---

[1] Mann, Dale, Conceptual Framework. New York: Program for Situational Analyses, Teachers College, Columbia University, April 21, 1969.

[2] This tendency is illustrated by several of the research histories in Phillip E. Hammond (ed.), Sociologists at Work, Anchor Books, Doubleday & Company, Garden City, New York, 1967. See especially the account by James A. Davis, "Great Books and Small Groups: An Informal History of a National Survey."

## The Principal Investigator

In August 1969 when he received a PSA invitation to submit a research proposal, Dr. Wilder had just completed a study of racial allocation in the Plainsfield, New Jersey school system which relied heavily on the use of coded records of high school students. This study raised interesting questions concerning the manner in which race appeared to influence the distribution of students to ability tracks within that town's high school. Of equal importance, it demonstrated the fruitfulness of monitoring school system functioning through a computer analysis of the records of individual students and described the basic logic of this approach. In previous years, Dr. Wilder had also been involved in a large scale study of the Washington, D.C. school system where his work pointed up the operation of race as a factor in staff selection to teaching positions within the system. Wilder viewed the PSA invitation as an opportunity to extend the school record monitoring approach and to further explore the effects of race on allocation processes. These influences are described in more detail in the appended research proposal which Dr. Wilder drafted after locating an advanced graduate to serve as Project Associate. (c.f. Appendix C). Much of the substantive focus of this report derives in an obvious manner from Wilder's previous research interests in the areas of race, school records, and student allocation processes.

## The Project Associate

Both the funding agency and the principal investigator had fairly concrete substantive interests which they wished to advance with the student grouping study. In this regard the perspective of the Project Associate was somewhat different. His previous work as a graduate sociology student had touched a variety of substantive issues but none in great depth. In the beginning his commitment to the project was career motivated and reflected his desire to obtain supervised research experience and to acquire a data base suitable for a dissertation. His interests in the theoretical and methodological issues addressed in this study emerged in the course of the work, but his career interest in the data base was an important influence in shaping the final monograph.

This interest manifested itself in a desire to obtain complete documentation on each sample student. To a large extent this interest stemmed from the impression which reading Blau's Dynamics of Bureaucracy had left on the Project Associate.[3] In this work, Blau derived several important understandings of how bureaucratic agencies function courtesy of a detailed analysis of individual and group performance records. His admiration for this work led the Project Associate to champion a school records approach to examining the substantive issues which the Principal Investigator's previous work had pointed towards. During the data analysis stage of the project, this single-minded interest in the school record data *sui generis* delayed analysis somewhat since the Associate was *most eager* to pursue effects related to the school record data, whereas the Principal Investigator was more concerned to examine race and mobility processes from all available sources including questionnaire-derived data. This mild divergence of research interests resulted in a broader analysis than would otherwise have occurred, but at the same time, it delayed agreement on how to organize this report which is an amalgam of the researchers' separate and joint interests.

### The Cooperating School District

The three perspectives discussed so far account for the major emphases found in the research report. Unrepresented as a major influence in the shaping of this report - but a fourth point of view of great interest - is the school system in which the research was conducted. The involvement of the Transurbia system in the PSA research was the consequence of a long-standing research connection between it and the Department of Educational Administration at Teachers College. The PSA leadership had decided to preselect a single research site for all three projects. The availability of background data from previous studies favored the selection of Transurbia. The School Superintendent, recently appointed from outside the system, had little reason not to cooperate with the proposed cost-free research projects. At the very least, they would increase his knowledge of the system. At a meeting in early October with the three research teams and the new PSA coordinator, Anthony Cresswell, the Superintendent appeared to adopt a wait-and-see attitude. He listened carefully to descriptions of the proposed research, clarified some minor administrative points, but in no way sought to impose his own more immediate concerns on research objectives. It was enough that the projects all dealt with plausible problems. Whatever his hopes and motives, he extended and delivered system-wide cooperation to the research. His cooperation increased the desire of this research team to produce a report serviceable to the system, though this itself was never a specific objective.

---

[3] Blau, Peter M. The Dynamics of Bureaucracy, Revised Edition. Chicago: The University of Chicago Press, 1963.

## Study Design

Our discussion so far has touched upon the purposes of various participants in this project. From these general perspectives we shall now attend to more specific actions of the researchers and to the time-bound schedule of the work itself. The logic of systematic research requires that study purposes be translated into a study design. Quite often this translation assumes the form of a written document of a cookbook variety - a listing of concrete actions thought necessary to realize the various study objectives. In this instance, the study design emerged informally in the form of a mutual understanding between the researchers which developed in conversations throughout the late weeks of September and early October.

The centerpiece of the study design was taken from Wilder's Plainfield research. This was the school records codesheet, an instrument with which to reorder and code student school records so that they would be suitable for computerized system monitoring. The idea was very much a common sense one. Data on individual students was to be arranged into a longitudinal or historical file. This simply means that information on the students' ninth grade year is associated with information concerning his tenth grade year and so forth. All relevant information on an individual is brought together in one location. Though this contrasts with the way in which schools normally store student information, it is hardly an esoteric arrangement.

Traditional student record keeping practices contain an irony which the study design anticipated: in their usual form, these records do not allow system members to monitor educational processes. Since a major objective of the research was to institute a monitoring system for central administration, the first step had to involve reordering student data into longitudinal files. Imagining the record keeping of the Transurbia system to be analogous to Plainfield's, the researchers quickly concurred on the central position of the school records codesheet and proceeded to discuss sampling refinements and additional data collection with which to extend the Plainfield work.

A limitation of the Plainfield work was that school records data were analyzed only for one high school class. Although the records collected spanned the academic careers of those students from eighth through twelfth grade, it was impossible to judge whether the student allocation and grading systems were changing. If they appeared different between ninth and twelfth grade, perhaps this reflected peculiarities in the age-graded curriculum rather than changes in administrative practices over that time period. In order to examine system changes over time, comparable data from different time periods is required. The researchers allowed for this capability by deciding to study three different high school classes in Transurbia: specifically, the classes of 1965, 1969 and 1970. The rationale for these specific choices was as follows: by studying the then senior class of 1970, they would be able to administer an attitude survey which could be related to the school records data; the class of 1969 would inform them of the relationship between high school careers as gleaned from the school records data and college attendance and this relationship would likely be comparable to that of the 1970 class; the class of 1965 would provide baseline data with which to assess the extent to which grouping and grading practices were changing within the system.

A second extension of the Plainfield work was less the result of design than happenstance. Whereas Plainfield had only one public high school, which was racially mixed, Transurbia had two: one larger, predominantly black, and lower middle-class; the other predominantly white and middle class. As discussed, the research site was pre-arranged so that these conditions suggested interesting between-school comparisons which otherwise might not have entered the study design. In terms of specific design allowances, the existence of two high schools was not expected to greatly alter the Plainfield work pattern: the researchers would simply create a more flexible school records codesheet.

A third extension of the Plainfield study was the decision to administer an attitude survey to the 1970 senior class. The motive for this extention was to explore attitudinal dimensions related to student grouping and also to supplement student background information which the researchers felt might not be plentiful in the school records. It was decided to postpone the designing of the questionnaire itself until early spring following preliminary analysis of the school record data. The questions then could also be used to clarify specific research findings derived from that analysis.

These major elements of research strategy had crystallized by early October. In conjunction with this, a rough research schedule was devised: the school record data collection was to be completed by the end of December and preliminary analysis of it by the end of January. The questionnaire for the 1970 seniors would then be devised, pretested, and administered in the early Spring. Analysis of it in conjunction with further school record analysis could then be undertaken in the late Spring and a final report written before the Summer recess of 1970.

## Field Work

As discussed, the study would primarily involve the locating, coding, processing, and analyzing of fixed school record data. The researchers assumed that the vast preponderance of desired records material would be available though they imagined some small complications over the addition of a second high school and several more feeder schools. The only student data that they feared would prove elusive were SES and family education background information and the questionnaire was expected to overcome the deficiencies in this area.

With a view to determining logistics and to designing the school records codesheet, the researchers conducted several interviews in Transurbia in late October. They met with members of the guidance and administration staffs at both high schools, junior high school administrators, and central office personnel. Among the more interesting discoveries of this period was that the two high schools utilized different grouping patterns and also different student record keeping systems. The researchers saw this first as welcome news since it would enable them to demonstrate the flexibility of their approach while in no way detracting from the case study nature of the research. Differences in record keeping practices were more disturbing since these prompted the realization that virtually complete data might be available only in the smaller more middle-class school.

The problem involved recreating student grouping practices. The researchers had originally hoped that grouping data might be centralized and stored for each year, but learned that centralized scheduling data was available only for the 1969-1970 school year. At the larger School A past classroom grouping data could sometimes be found in the counselors' files - the permanent record cards indicated only what courses were taken and what grades received. To their discouragement, the permanent record card, readily available on most sample students, did not specify in what course section the student had been enrolled. Though a similar situation prevailed at the other school, the counselors' files appeared to be more complete and these definitely were available for the classes of 1965 and 1969. The exact location of the counselors' files for the 1965 and 1969 classes at School A was unknown so it was impossible to be sure what grouping information they would contain. Certainly it was clear both in terms of the proposal and the study design that grouping information was essential. To the researchers' discomfort, these early interviews hinted that such information might not be widely available for past years - the major hope appeared to be in the unavailable counselors' files. Nonetheless, they decided to stick to the original study design. They acted on the sort of common sense assumptions which sociologists professionally are supposed to distrust: that records which should exist do exist.

Thus, they proceeded to construct the school records codesheet, custom-designed for information doubtfully available. They needed the codesheet in final form in order to collect the sample. For each of the three classes at both schools, the sampling procedures called for a search of the attendance records for all four high school grade-years. The object was to pick up the names of all students who pertained to one of the sample classes' cohort groups. This was necessary since class membership can change quite drastically between ninth and twelfth grade and the study plan was to reconstruct classroom group compositions at each of these stages. This procedure, of course, produces a rather inflated sample size. For example, the graduating class of 1969 at School A numbered 451 whereas the sample size for this class numbered 745. Since the estimated total sample was about 3,000, the strategy was to enter names directly on the codesheets and thereby avoid a depressingly tedious scrivening task. Using coders imported from New York City and working in whatever space happened to be free at the moment, sample construction was completed by the end of December.

With the coming of the New Year, came also a new set of unanticipated concerns. The time-consuming transport of coders and the absence of space noted during sample collection began to loom as a severe research problem. Already the investigators had abandoned as impractical an original intention to collect data at each of the feeder schools. Now they experimented with Xeroxing high school permanent records so that some coding could be done at Teachers College. However, these colored forms inscribed with various shades of blue ink did not lend themselves to this practice. As they became resigned to the need to perform all coding on site the researchers were able to secure, at the last moment, suitable office space. During this period also, an able field supervisor was hired for coding and she was able to supply the Project with a half-dozen responsible coders. Nonetheless, as of mid-January, when school record coding began, the much desired grouping information had still not been found.

A two-stage school record coding procedure was hastily improvised for the larger coding job at School A. The first and immediately do-able part involved the transferring of background, grading, and test score data from permanent record cards to codesheets. With this task underway, the Project Associate was leading a rather curious subterranean life in the storage cellars of School A. There in dusty closets, among hobbled chairs and a variety of other unused furniture, he fended for the missing file boxes. This untidy and desperate foraging was not without reward: he was able to locate most of the 1969 files and the majority of the 1965 files as well. These were transported to the coding room and whatever grouping information they contained was coded as the second part of the coder's routine. Unfortunately, they proved to contain little useful grouping data.

The coding of school record data at the two high schools pressed on to completion in the middle of February. Not only was grouping information scarce at School A, but hopes for this information at School B also appeared unfounded. Complete though guidance files were at School B, grouping data were rarely included. The realization that classroom grouping would have to be excluded as the subject of study was devastating to the researchers, especially to the Project Associate who planned ultimately to derive his dissertation from this data . If grouping data were not available, the study focus would have to shift to curriculum differences, race and between-school comparisons in an attempt to provide the best retrospective system monitoring that the data base would allow. At that point it appeared that field conditions would greatly revise the study design.

Also, by mid-February a new factor was beginning to exert sway on the study design. Weeks and even months had eroded from the school year and the planned questionnaire was still only in the germinating stage. To rectify this, the researchers had to abandon their earlier decision to have the questionnaire adjunct to the school records analysis. Though field work coding was completed, the school records codesheet itself would still need recoding onto a form better suited for key-punching, verifying, and transferring to computer tape -- at the very least, several more weeks would elapse before data analysis could begin. Lacking any very definite research issues on which to focus the survey, it was decided to incorporate a wide range of school-related attitude items from perceptions of drug use to feelings about ability grouping.

The student survey was pretested on several classes of Transurbia high school juniors during the first week in March. Minor revisions followed and the final instrument was reproduced in the middle of March. One more misfortune lay ahead, and further ahead still some unexpected and strange good luck.

By mid-March a problem familiar to most research projects had arisen. The originally spare budget had been stretched embarrassingly to its limit, chiefly by the unexpected need to import coders from New York City. As the researchers had become resigned to processing a very limited perspective on school processes, their hopes turned increasingly toward the questionnaire: perhaps it would point up interesting school attitude differences among the various twelfth grade classroom groupings. In order to maximize the value of the questionnaire results, textbook procedures for survey administration were followed to the hilt. This led to hiring, for example, differentially black and white graduate students to distribute and monitor questionnaire completion during English periods at the two high schools. A common though unprovable assumption of survey work is that homologous conditions increase the validity of questionnaire responses. Whatever the merits of this dogma, it was observed in the Transurbia research.

Arrangements were made to administer the questionnaire to School A seniors during the English periods one day in late March. Elaborate negotiations with the English Department Chairman had provided the needed school time and it was planned to limit questionnaire administration to one day only. These plans and the baroque forethought which had gone into them were sundered by a late Spring snowstorm which forced cancellation of several class periods and resulted in abnormally high absence rate for the others. The budgetary and logistical situation resulted in a decision to administer questionnaires that day, but the response rate varied from class to class in an alarming non-random way. Subsequent arrangements were compromised by special circumstances which brought about an abnormally high absence rate. As a result, students with high absence rates tend to be especially underrepresented as survey respondents at School A. The administration of student questionnaires at School B in mid-April was not similarly flawed. The questionnaire, as administered, would prove adequate to supplement a school records analysis but the sampling problems limit intensive analysis and generalization at School A.

Fortunately, a saving discovery was to be made. The processing of the collected school records data had proceeded throughout the travails of questionnaire administration. Typically, initial scanning of processed, coded materials points up some contradictions and gaps in the data as these usually occur when thousands of bits of information pass through human hands. To resolve and fill these in, additional checking of source material is required. This final, preanalytic step is referred to as "cleaning the data." As luck would have it, on a cleaning expedition to School B, the Project Associate stumbled on some curious looking computer printout of grade rosters during this mid-April period. To his ecstasy, they were grade rosters from past years which bore course section identification; and to his frustration, the administrative secretary to School B was certain that IBM course cards from previous years were kept in storage vaults at the school.

From this point, it was a fairly simple matter to trace down the needed grouping data at *both* schools. It was even possible to figure out how this wealth of long sought data had escaped the researchers' no[illegible]. Inquiry at the central office administrator in charge of data processing revealed that course card materials were available centrally on computer tape for 1969 and 1970, and that course cards were stored at the two high schools for several previous years. These materials were regarded as *grading* rather than *scheduling* information and early inquiry about the latter did not suggest linkages between the two. The investigators knew grading data to be available on the permanent record cards and this certainty blinded them to sensible connections between grade processing and course section identifications. In retrospect, the worst strategic error was that the scope of the earliest interviews did not include school secretaries who clearly are most expert about student school records.

The story of the research from this discovery to the writing of the PSA report is complicated mostly by the economics of the project. Mindful of the central importance of the course cards to our design, the PSA leadership was able to provide sufficient extra funds to code and process the approximately 20,000 IBM cards relevant to the class of 1970 at both schools. Complete grade nine through grade twelve course card data was available for the classes of 1969 and 1970, and absolutely no course cards were available for the class of 1965. Given the budget limitations and the rapid approach of the summer months -- during which neither the researchers would be available to the project -- late spring efforts were focused on abstracting

English and Math grouping histories on 1970 class members. As revised, the study design now entailed the creation of a four-card data file on each 1970 student: Card 1 was the original school records codesheet data; Cards 2 and 3, the questionnaire data (dummy) cards to be provided for the frequent occurrence of missing data here); Card 4, the newly created grouping history information. This data file became available only the following September, retarded by both minor technical difficulties and the languid New York summer. Having exhausted both our original and supplemental grant on the data collection stage, the research project had no funds seemingly with which to provide salaries for either investigator to continue analysis and the report preparation. Both researchers became involved in other undertakings as the new academic year began, and data analysis thus proceeded slowly, labored by these circumstances. Also, at the suggestion of the new PSA Coordinator, the researchers agreed to prepare a paper for the American Educational Research Association on their Transurbia work. This further delayed report preparation, though it did usefully spark data analysis. Finally, in the late spring of 1971, almost a full year after the Project Associate's return to New York with an unexpected horde of grouping data, preparation of the final report began.

# APPENDIX B

## School Record and Questionnaire Analysis
## A Brief Methodology

School administrators and teachers commonly use student school record data to help to resolve educational decisions such as whether to promote a child or whether to encourage his college aspirations. Most often they utilize records at the level of the individual student to gain insight into that student's adaptation to the school environment. In this report, we have used school records - (grade reports, attendance, standardized tests, etc.) -- in a manner which focuses on the school structure rather than on the individual student. In this appendix we shall discuss how these data have been processed so that they speak most directly about the system itself. We shall also discuss the questionnaire utilized in this study, especially its relationship to the school record analysis.

The data preparation and analytic methods employed in this study derive from the survey research tradition in sociology associated with the work of Paul F. Lazarsfeld. [1] We have applied a set of well developed techniques to school record data at the level of the individual: methodologically we have treated these data as if they were survey data. Readers wishing to obtain greater familiarity with these techniques should refer to the sources cited in the footnote above. Our brief discussion below touches only on several unusual aspects of this method.

When an educator looks at a student's cumulative school record file, what sort of things catch his attention and provide him with insight? There are a variety of possibilities. Some of these are fairly static and are most relevant to a particular point in time: the student's present year grades; the courses he is presently taking; his most recent achievement test profile; etc. Other elements of interest are dynamic in that they derive from changes over time: such as changes in the level of difficulty of courses taken (whether the student has been promoted or not);

---

[1] A detailed statement of this methodology may be found in Herbert Hyman, Survey Design and Analysis, The Free Press, New York, 1955. For a statement concerning the theoretical basis for this method, see Paul F. Lazarsfeld, "Evidence and Inference in Social Research", Daedalus, Vol.87, No. 4, 1958 (Bobbs-Merrill reprint number S-441).

changes in the student's grade profile from one year to the next; or whether achievement scores reflect satisfactory gains from one year to the next. Still other items of interest might be termed integrative as these stem from observing the relationship among the static and dynamic elements. For example, the student's grades in relationship to his achievement and aptitude test scores; whether observed gains or losses in test scores are matched by similar changes in grades received; whether such changes are reflected in increased or decreased level of program difficulty; etc. An experienced educator, seeking to gain insight into a student from his record file, will perceive all three sorts of elements -- static, dynamic and integrative -- and he will induce from them a more or less accurate picture of the student's relationship to the school environment.

A central objective of this report was to obtain a picture of the school system in relationship to the students. We also considered static, dynamic, and integrative elements derived from "looking at" student school records. There were certain technical difficulties in doing this, however, since our unit of analysis was usually the school class rather than an individual student. To look at one thousand cumulative record files at the same time is quite beyond the unaided capacity of a pair of social scientists A great mechanical complexity in our research sprang from this need to perceive a large quantity of data at one time. To do this required the development of a distinctive, if rather simple, computer technology and this in turn was dependent on the successful completion of a series of coding operations. This coding and related data preparation activities will be described in a later section. The computer methodology which followed these stages is basically equivalent in many respects to the educator's perusing a student's cumulative record folder. We shall explore this analogy below.

## Computer Methodology

We are skipping over the details of data processing and focusing on the analyzable data which resulted from this labor. Of what did these data consist? This question can be answered very precisely: two separate data files resulted from our efforts. The first consisted entirely of student record data coded in Transurbia schools. Such data was collected on three graduating classes at both of the Transurbia high schools, on approximately 3,000 students together. The codesheet in Appendix D was utilized for this operation. The second data file consisted of four IBM cards of data per subject and the subjects for this file were the Class of 1970 students at both high schools, approximately 1,000 students. The first card of data on each subject in this file was a replica of the School Records Codesheet data of the first file; cards 2 and 3 consisted of data coded from the student questionnaire administered to the 1970 seniors (c. f. Appendix E); card 4 consisted of grouping, grading, and test score data coded from the lately discovered school records (c. f. Appendix A).

Our data analysis involved "looking at" the two school record data files. Most of the analysis reported in this document derived from this second data file. As mentioned above, this file consisted of 4 cards of data per student arranged in the order diagrammed below:

| | | |
|---|---|---|
| | Card 1 | |
| School A | Card 2 | Student #1 |
| Class of 1970 | Card 3 | |
| | Card 4 | |
| | Card 1 | |
| | Card 2 | Student #N |
| | Card 3 | |
| | Card 4 | |
| | Card 1 | |
| School B | Card 2 | Student #1 |
| Class of 1970 | Card 3 | |
| | Card 4 | |
| | Card 1 | |
| | Card 2 | Student #N |
| | Card 3 | |
| | Card 4 | |

There were approximately 4,000 IBM cards in this file, some of which were "dummy" cards inserted to meet certain computer programming requirements. This device will be discussed subsequently along with other technical data preparation stages.

To perceive static elements in this data at the level of the 1970 school class, we fed the 4,000 cards into a large computer. Table II in Chapter Two displays several static elements, standardized test score means for the classes of 1970 at the two high schools. As the educator looking through an individual student's file perceives such static elements directly, so the computer program enables us to perceive these elements at the level of the school class. In terms of the IBM card images diagrammed above, the test scores were coded on Card 1: the computer reads in all the cards and keeps track of each student's test scores which it sums as directed by the computer program. It ignores all other data not relevant to this particular task. The method of observing dynamic elements in this data is equally straight-forward and Table II is again a good example of this. Referring to this table, we note that the language SCAT scores at the two schools decline between the 9th and 11th grades. To note this is to note a dynamic element at the level of the school class, part way analogous to the educator's noting a decline in a student's test profile from his 9th to his 11th grade testing.

This example raises an interesting methodological point. When an educator looks at a dynamic change in a student's test profiles, he is considering data about a particular student. However, when we consider changes in the profile of a school class, we normally have no assurance that such changes reflect differences with respect to certain students from one period to another or whether they reflect basic changes in the composition of the class. Especially in urban districts where student turnover is high, changes in class composition will tend to alter the meaning of cross-sectional test score profiles. Commonly a lowering of the class test profiles occurs when the school receives an influx of lower SES students. For this reason, the meaning of Table II is ambiguous. The drop in English SCAT scores may reflect a genuine drop in aptitude or it may signify a change in class composition. The arrangement of the data files allows longitudinal as well as cross-sectional analysis.

That is, we can examine the grouping or test scores of those students who were in the system at both points in time.

The computer analysis of integrative elements is more complex, though only slightly. Table XXI in Chapter Four displays an apparently complicated relational profile of School A which is rather easily explained with reference to the 4 card data file above. The computer is instructed to read in only School A cards and with respect to these, to ignore cards of non-Black students. It determines race by referring to a data field on Card 1 (c.f. Codesheet, Appendix D); school affiliation is determined by the I.D. number which each IBM card contains in the first few columns. The computer is then instructed to sort a student's data according to his 12th grade English group (data contained on Card 4); his class rank (data contained on Card 1); and his questionnaire response concerning whether he plans to attend college (data contained on Card 3 - see question 29, page 10 of Questionnaire in Appendix E). The computer then produces this table by a series of simple sorting and counting operations. It is enabled to do this by a computer program which provides appropriate instructions and by the arrangement of the data in the second file, which facilitates integrative analysis by bringing together these various static elements.

In sum, the central methodology involved in this report is similar to the method of an educator looking through a student's school record file. The computer with its enormous capacity to deal with many elements at the same time permits witnessing of static, dynamic, and integrative school record and questionnaire elements at the level of the school class. Our responsibility as researchers was to interpret these tabular syntheses of Transurbia high school class structure so that the picture produced was a fair and useful representation of the allocation and reward system operant in the schools.

## Data Collection and Preparation

We have just considered the basic pattern of computer analysis utilized for this report. In Appendix A we recounted the research experience as it evolved in the field, in relationship to the original proposal, and from the point of view of the research participants, especially the Project Associate. What remains undiscussed are the nuts and bolts of data collection and processing. These include such topics as coding, cleaning of data, keypunching, and the construction of data files. Readers not familiar with large scale data collection techniques may find a few remarks on these useful.

Coding data from the original source materials was the first, most time-consuming, and most expensive procedure involved in this research. An initial coding of school records data was completed in three stages. Compiling the sample of students from school records was the first stage. As planned, our sample consisted of all students who ever belonged to the classes of 1965, 1969, or 1970 at either of the Transurbia high schools. To compile such a sample we needed a means of identifying all students who had passed through the classes' cohort groups: the obvious source for this information were school attendance rosters. In Transurbia attendance rosters are kept for each month of the school year: if a student enters the 10th grade year for the class of 1970 in the month of December and departs in April, his name will appear on the rosters of those months and all intervening ones but will not appear on either September or June rosters. To be certain then of picking up the names of all students ever belonging to the sample classes, it was necessary to scan each roster month for all four school years for all three classes at both high schools. For this purpose, approximately half a dozen coders were employed: they coded the names of the sample students directly onto the school records Codesheet (Appendix D) as well as information concerning grades attended. At the completion of this first stage, we possessed the names of all sample students, and each had been assigned a unique, arbitrary I. D. number that incorporated school and class year identification.

The second stage in the initial coding of school records involved completing the School Records Codesheet. For this also, a team of coders from Teachers College were employed. Basically two separate sources of information were available to them: the students' permanent record cards and their counselors' folders. Referring to the School Records Codesheet appended, the coder would search for data in these source records. When the coder was in doubt as to how to interpret a particular category, he asked either the coding supervisor or the Project Associate, who was often on site during the three week coding period. This procedure worked smoothly when data was available, but as is discussed in Appendix A, quite frequently certain sorts of crucial data were not available, especially data on class grouping. Regardless, this second stage of the initial coding was completed on all sample students.

The final part of the initial coding consisted of transforming the School Records Codesheet data to a more easily scanned format for keypunching. The most important requirement for reliable punching of data onto IBM cards is that each datum be clearly associated with the appropriate IBM card column number. It would have been possible for a keypuncher to work directly from the School Records Codesheet since these sheets had column numbers associated with various data fields. However, this would have been both costly and error provoking. Highly paid, high speed keypunchers would have found this two page form difficult to scan. To facilitate keypunching each School Records Codesheet was transcribed onto a one page boxed codesheet which maximizes legibility to the keypuncher. This transcription was the final part of the first coding operation.

To sum up this coding operation, we might note several important aspects typical of coding in general. Coding requires supervision: part of the responsibility of the coding supervisor and the Project Associate was to spot check the work of the individual coders. In several instances unreliable coders were replaced. An additional benefit of close supervision is that the interpretation of ambiguous data is continually monitored which results in greater consistency, if not ultimate truth. Coding also benefits from use of a form that is easily coded: the School Records Codesheet was designed so that the first page could be completed from several sources and the second page from a different source. The coding response categories appear directly on the form itself. Use of such a form is not without cost: it is not as easily scanned by a keypuncher as a cleaner version might be. The most feasible solution for us, considering the large amoung of data being processed, was a final transcription stage noted above.

The usual procedure after the coding and punching of data is to enter this data onto the computer and obtain the distribution of data. Commonly sociologists refer to this stage as generating the first set of marginals. When there is much data being processed, these first marginals will point up inconsistencies and other oddities in the data. For example, we discover that a few of the 3,000 subjects are without identification by sex, datum almost certainly available in the school records. The marginal runs allow the sorting out by I. D. numbers of subject data with certain kinds of mistakes: it does not indicate whether these mistakes derived from keypuncher, coder, or source materials. Also this procedure will not discover mistakes which result in valid-seeming numeric representations as when a girl is given a male code in the sex identification field. In that the first data file consisted of 3,000 cards with approximately 60 columns of data on each, or a sum of 180,000 discrete bits of information, the first marginals resulted in the discovery of some remediable error. The remediation of this error is termed "cleaning the data": it involves tracing down the source of the error, correcting it if possible, and repunching offending IBM cards. Usually some rechecking of source materials is required in order to clean the data. As is discussed in Appendix A, the fate of this project benefited unexpectedly from one such cleaning expedition to the source materials.

Following the cleaning of the data, the final step prior to analysis is the formation of the data file. This step presented little difficulty with respect to the first, or School Record Codesheet file. The 3,000 cleaned cards were ordered by I. D. numbers, which had the effect of arranging them by school and school class and entered onto computer tape. These cards were immediately available for analysis. The formation of the 4 card per subject second file on the class of 1970 was more complex. This complexity stemmed entirely from a programming desideratum: that each subject possess the same number of IBM cards regardless of whether these cards contained useful data. The first card of this 4 card file was a duplicate of the School Record Codesheet card; cards 2 and 3 were derived from the questionnaire administered to the 1970 seniors at both high schools; card 4 was created from lately discovered school record data. Clearly many members of the 1970 cohort groups would not possess a useful card 2 or card 3: all of those 1970 seniors who were absent days when the questionnaire was administered. In order to meet the programming disideratum of a fixed number of cards for each subject, "dummy" or blank cards 2 and 3 had to be generated for these students. These cards were differentiated from actual questionnaire-derived cards by an arbitrary code inserted in the 79th column of card 3, which otherwise would have been blank for all subjects. Similarly when card 4 data was not available on a particular subject, a dummy card 4 was produced. After this data was cleaned, the 4 cards were matched by I. D. numbers and merged to form file 2.

The methodology we have described is not original nor is it especially complex. Its basic aim is to provide comparable, reliable data on a large number of subjects in a form that is easily manipulated. Credit for these methods rests with a long line of empirical social science researchers who worked out the basic strategies long before computerized analysis became common. The central lesson particular to our research is that student school record data lends itself to treatment as questionnaire data. It is as if we asked students on a questionnaire what grades they received rather than coding this information from the records. The greatest difference, perhaps, is that the school record data will tend to be more reliable. From the point of view of sociological methodology, this innovation is scarcely of major import. It is, however, an important innovation in terms of the way in which schools normally process such data.

# APPENDIX C

# RACIAL ALLOCATION WITHIN AND AMONG SCHOOLS AS A PROBLEM IN ADMINISTRATIVE DECISION-MAKING

A RESEARCH PROPOSAL

Submitted to the

Program for Situational Analysis, Department of Educational

Administration, Program for Educational Leadership

Teachers College, Columbia University

by

David E. Wilder

Department of Philosophy and the Social Sciences

August 25, 1969

There can be little doubt that the most troublesome problems for school superintendents during recent years have usually concerned race. Given a national mandate to integrate schools and to provide equal educational opportunities for blacks and whites, school superintendents have responded in a variety of ways at the local level. Some have stood pat, but most superintendents have made at least minimal efforts toward integrating their schools. Bussing, pairing schools, and otherwise redistricting have been conspicuously unsuccessful in most instances as devices for redistributing the races among the schools. More recently, however, the allocation of racial groups within schools according to curricular and ability group placements has become a volatile issue. Washington, D. C., for example, officially eliminated its tracking system as an aftermath of the Passow Report, and in 1968-69, Plainfield, New Jersey commissioned a Teachers College study directed at evaluating local grouping practices which the local blacks claimed were discriminatory. The purpose of this study will be to apply a systems analysis approach to administrative decisions that affect racial allocation both among and within schools in East Orange, New Jersey.

For purposes of our analysis, the immediate environment of local school systems can be seen as consisting of a variety of ecological areas usually differentiated by the racial and socio-economic mixes linked closed with test scores, academic performance, and levels of expectation. Thus when students from quite different social backgrounds are input for the same school, these students will tend to end up in different curriculum and classroom groups after they have undergone screening. In a racially integrated school, such as Plainfield High School, this typically results in lower ability groups that are mostly black, and higher ability groups that are mostly white. Where schools are less integrated, this tends to produce black schools where most students are in lower ability groups and white schools where most students are in higher groups.

School superintendents' decision-making is relevant for the allocation of races both among and within schools. Universalistic cri-teria for the assignment of students are typically drawn up at the central office level, but there tends to be considerable slippage in the particularistic direction. There are some communities where there is blatant gerrymandering of sending districts along racial lines, but even where this does not occur, individual students somehow manage to attend schools outside the districts where they reside. Often this appears to be largely a result of the inability of the superintendent to monitor the system because of the inadequate feedback that he receives. However, there is probably far more opportunity for invidious factors to influence the assignment of students to classrooms and ability groups within schools. Indeed, the role played by socio-economic factors in the decision-making of guidance counselors has been well documented by Cicourel and Kitsuse.* In Plainfield, careful examination of the school records suggested a number of places where similar processes were operating to the detriment of the blacks. For example, while official policy implied that test scores and academic records were the primary factors in ability group assignments, it was found that blacks were assigned disproportionately to slower groups and whites to faster groups when their test scores were the same. That is to say, whatever additional factors were used in making assignments worked to the detriment of the blacks more than the so-called culturally biased tests would have had these been used alone. Moreover, the school system was able to maintain a "mobility myth" to the effect that movement was frequent between levels, and that across level enrollment by individual students was common, when neither was true. Indeed, ability group assignments were largely fixed by the seventh grade level.

In the Washington, D. C. study the allocation of staff members to schools and classrooms was found to reflect a similar racial stratification, with whites and more experienced teachers more often teaching the white and the more advanced students. Indeed, considerable evidence was found that teachers had strong preferences for teaching these groups and that these desired teaching assignments were among the chief rewards they received from the system for continued service.

---

*Aaron V. Cicourel and John I. Kitsuse, The Educational Decision-Makers (Indianapolis: Bobbs-Merrill), 1963.

The proposed study will be an attempt to build on the findings of both the Plainfield and Washington studies by using a systems analysis approach. In addition, an attempt will be made to institute an adequate monitoring system to enable the central administration to keep informed of how the system of racial allocation both among and within schools actually operates.

School records will constitute a major part of the data for the proposed study. Recent high school graduating classes will be traced back and coded according to the attributes they exhibited in earlier years so that their academic careers can be reconstructed in a manner similar to the one used in the Plainfield study. This will allow description of how system inputs and outputs are related under different conditions of allocation. In addition, current junior high school students and other selected groups will be submitted to systematic analysis in order to determine whether past patterns still persist and to identify changes in the system as revealed by different cohorts.

Interviews will be conducted with the school superintendent and appropriate staff in order to determine official policy for grouping and racial allocation as well as perceived difficulties in their implementation. Feedback concerning the operation of the system will then be sought through a questionnaire survey of representative participants at various levels of the system.

# APPENDIX D

1 H.S. '65 (1)
2 '69 (2)
3 Neither '70 (3)

______________________________ ( )
(last) (first) Middle)

## Transurbia School Records Code Sheet

Column #

I. D. #_________ 1-5

Grades att'd 7th 8th 9th 10th 11th 12th 6-11

Transferred into between grades 7 and 12 _________ 12

El. School: 13-14
01 02 03 04 05
06 07 08 09 10
11 12 13 14 15 OTHER

Jr. High: 1 2 3 4 5 6
7 OTHER 15

Lives with: Father & Mother _1_ M. only _2_ F. only _3_ Other _4_ 16

Father's Ed.: Elem only _1_ Some H.S. _2_ H.S. Grad _3_ College _4_ 17

Father's Occ.: Unemployed _1_ Unskilled _2_ Skilled _3_ White Collar _4_
Professional _5_ 18

Reason Left: Graduated 1 Private School 2 Moved 3 Still in School 4
Institution 5 Hospital 6 Pregnant 7 Dropout 8 19

Program: C.P. _1_ General _2_ Business _3_ 20

Race: Black _1_ White _2_ Puerto Rican _3_ Other _4_ 21

Sex: Male _1_ Female _2_ 22

Rank in Graduating Class: ( 1 ) 23-24

Sports: Basketball or Football _1_ Other _2_ None _3_ 25

Other Activities: Student Gov't or Class Council _1_ 26
Band or Chorus _2_ 27
Special Interest Clubs _3_ 28

Discipline Record: Yes _1_ 29
Psychological: Yes _1_ 30
Remedial Reading: Yes _1_ 31

Page 2 I.D. #______________

Column #

Modal Grades: A B C D E

(circle) 10th: 1 2 3 4 5 32

12th: 1 2 3 4 5 33

Total absences: 10th grade__________ 34-35

12th grade__________ 36-37

Track: 10th Gr.: Eng. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 38-39

11th Gr.: Math 0 1 2 3 4 5 6 7 8 9 10 11 12 13 40-41

12th Gr.: Eng. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 42-43

12th Gr.: Math 0 1 2 3 4 5 6 7 8 9 10 11 12 13 44-45

7th Grade Homeroom #__________(Sch.: )

7th Grade Track: Top___1___Middle___2___ Bottom___3___ 46

Modal Grade (7th Gr.): A__1__ B__2__ C__3__ D__4__ E__5__ 47

Total Absences: 7th grade__________ 48-49

Jr. High Sch. I.Q.: (Lorge Thorndike) __________ 50-52

Otis I.Q. (local grping): 1 2 3 4 5 6 7 8 9 10 11 12 53-54

Jr. High Reading Level ( ) - G.L. ( . ) = __________ 55-57

(date) ( )Arith. Level ( . ) - G.L. ( . ) = __________ 58-60

Metropolitan___1___ Iowa ___2___ Stanford ___3___ OTHER ___4___ 61

SCAT Scores: (Compute percentile average from range, rounding up !!!!)

9th Grade: Language percentile __________ 62-63

Math percentile __________ 64-65

11 Grade : Language percentile __________ 66-67

Math percentile __________ 68-69

Scholastic Aptitude: (CEEB) (Use highest scores) Verbal __________ 70-72

Math __________ 73-75

College Plans: None ___1___ Jr. Colleg or 2-year Technical ___2___ 76

4-year Public College in State ___3___

4-year College (private or out of state) ___4___

Name of College __________

Coded by ____________________

## APPENDIX E

## TRANSURBIA HIGH SCHOOL QUESTIONNAIRE

THIS QUESTIONNAIRE HAS BEEN PREPARED BY A RESEARCH TEAM FROM COLUMBIA UNIVERSITY. IT IS PART OF A PROJECT TO IMPROVE THE QUALITY OF EDUCATION AT THE HIGH SCHOOLS IN TRANSURBIA. IT IS NOT A TEST. THERE ARE NO RIGHT OR WRONG ANSWERS. PLEASE ANSWER EVERY QUESTION AS HONESTLY AS YOU CAN. ABSOLUTELY ALL ANSWERS YOU GIVE WILL BE STRICTLY CONFIDENTIAL.

Your Name ____________ I. D. Number ____________ 1-5

1. How old are you? ________ years 6-7

2. Which of the following adults lives at home with you? (Check All Appropriate Categories).

| | |
|---|---|
| Mother ________ | Father ________ |
| Stepmother ________ | Stepfather ________ |
| Grandmother ________ | Grandfather ________ |
| Aunt ________ | Uncle ________ |

Other (Describe Relationship) ____________________ 8-9

3. If you have any BROTHERS or SISTERS please list their names and their ages on the appropriate lines below. (Include half-brothers and half-sisters if they live at home with you.)

| | | |
|---|---|---|
| Brothers | ________ | Ages ________ |
| | ________ | ________ |
| | ________ | ________ |
| | ________ | ________ |
| Sisters | ________ | ________ |
| | ________ | ________ |

I.D.# ________

4. Which program are you presently enrolled in at the high school?

GENERAL ________ COLLEGE PREP ________ BUSINESS ________ ________

5. What is your father's occupation? (e.g. lathe operator, truck driver, insurance salesman, etc.) 13/

6. What is your mother's occupation? (e.g. secretary, store clerk, housewife, etc.)

7. How far did your father go in school?

15/

No formal schooling ________

Grammar school ________

Some high school ________

High school grad. ________

Some college ________

College grad. ________

Graduate school ________

Don't know ________

8. How far did your mother go in school?

16/

No formal schooling ________

Grammar school ________

Some high school ________

High school grad. ________

Some college ________

College grad. ________

Graduate school ________

Don't know ________

9. How many years have you lived in Transurbia?

17/ ________ years.

I.D. ________________

Part I In this section you are asked your opinion about a number of statements. CIRCLE the appropriate number according to how you feel about a particular statement. For example, if you Agree Strongly with it, circle the number 1, if Not Sure, circle the number 3, or if you Disagree Strongly, circle the number 5, etc.

| | | Agree Strongly | Agree | Not Sure | Disagree | Disagree Strongly |
|---|---|---|---|---|---|---|
| 1. | I can do anything I want to do when I really apply myself. | 1 | 2 | 3 | 4 | 5 |
| 2. | In general I have received fair treatment at this high school. | 1 | 2 | 3 | 4 | 5 |
| 3. | Once a student is placed in an English section he stands little chance of getting into a higher group. | 1 | 2 | 3 | 4 | 5 |
| 4. | I would find it easier to do my studies if other students at this high school were more serious about their studies. | 1 | 2 | 3 | 4 | 5 |
| 5. | Today there are many chances for a person like me to get ahead. | 1 | 2 | 3 | 4 | 5 |
| 6. | Generally, unless I am sure I know the correct answer I do not raise my hand in English class. | 1 | 2 | 3 | 4 | 5 |
| 7. | Each person in society is worth just as much as the next. | 1 | 2 | 3 | 4 | 5 |
| 8. | The main value of an education is to help a person find a better job. | 1 | 2 | 3 | 4 | 5 |
| 9. | People like me don't have much of a chance to be successful in life. | 1 | 2 | 3 | 4 | 5 |
| 10. | I would learn more in English if other students didn't "wise around" so much. | 1 | 2 | 3 | 4 | 5 |
| 11. | It only takes hard work to do well in school. | 1 | 2 | 3 | 4 | 5 |
| 12. | Even with a good education, I'll have a hard time getting the right kind of job. | 1 | 2 | 3 | 4 | 5 |
| 13. | Generally white students are treated fairly at the high school. | 1 | 2 | 3 | 4 | 5 |
| 14. | Generally I enjoy participating in most of my classes at the high school this year. | 1 | 2 | 3 | 4 | 5 |

I.D. # __________

| | | Agree Strongly | Agree | Not Sure | Disagree | Disagree Strongly |
|---|---|---|---|---|---|---|
| 15. | It is only fair that students who do well in school be given better job opportunities. | 1 | 2 | 3 | 4 | 5 |
| 16. | Generally when I have a problem I feel I can talk it out with somebody at the high school. | 1 | 2 | 3 | 4 | 5 |
| 17. | The students who are best in English should be put in the same English class together. | 1 | 2 | 3 | 4 | 5 |
| 18. | The amount of money a person's family has determines how well he will be treated at this school. | 1 | 2 | 3 | 4 | 5 |
| 19. | How bright you are depends mainly on how bright your parents are. | 1 | 2 | 3 | 4 | 5 |
| 20. | Generally I do not find my English class interesting this year. | 1 | 2 | 3 | 4 | 5 |
| 21. | Only students who get into one of the leading groups at this high school really get along well here. | 1 | 2 | 3 | 4 | 5 |
| 22. | The most and the least able students should not be mixed together in subjects such as English and Math. | 1 | 2 | 3 | 4 | 5 |
| 23. | Generally I have been given a fair chance to show what I can do at this high school. | 1 | 2 | 3 | 4 | 5 |
| 24. | Basically people are born bright or they are not - nothing you do can make you brighter. | 1 | 2 | 3 | 4 | 5 |
| 25. | When a group is denied fair treatment its members have the right to obtain this even if doing so breaks the law. | 1 | 2 | 3 | 4 | 5 |
| 26. | How bright you are depends mainly on how much you learn. | 1 | 2 | 3 | 4 | 5 |
| 27. | The students who are poorest in English should not be put in the same English class together. | 1 | 2 | 3 | 4 | 5 |
| 28. | Generally black students are treated fairly at the high school. | 1 | 2 | 3 | 4 | 5 |
| 29. | You don't have to do much work in order to graduate from this school as long as you keep out of trouble. | 1 | 2 | 3 | 4 | 5 |

I.D. # ____________

Part II In this section you are asked a series of questions. CHECK the line following the answer which best describes your feelings.

1. Generally, how much do you like school this year?

Very much ________
Somewhat ________
Not at all ________
Don't know ________

2. How much do you like your teachers generally?

Very much ________
Somewhat ________
Not at all ________
Don't know ________

3. How about your English teacher? Would you say you like him (her):

Very much ________
Somewhat ________
Not at all ________
Don't know ________

4. How satisfied are you with the way you are doing in school?

Very much ________
Somewhat ________
Not at all ________
Don't know ________

5. How interested would you say you are in most of your schoolwork?

Very much ________
Somewhat ________
Not at all ________
Don't know ________

6. As far as giving a good education is concerned, compared with other public high schools in the U.S., do you think your high school is:

Better than most ________
About the same ________
Not as good ________

I.D. # ________

7. How important would you say getting good grades in school is to you?

Very important ________
Somewhat important ________
Not at all ________

8. Generally, what is the lowest grade that you would really be satisfied with?

A ________
B ________
C ________
D ________
E ________

9. In general, how hard do you try to get good grades?

Very hard ________
Quite hard ________
Somewhat ________
Not at all ________

10. How good a student do your teachers expect you to be?

One of the best students in the class ______
Above the middle of the class ______
In the middle of the class ______
Just good enough to get by ______
Don't know ______

11. Do you think most people who are successful are successful because of ability, luck, pull, or the better opportunities they have had?

Ability ______
Luck ______
Pull ______
Better Opportunities ______
Don't know ______

12. In general, are your closest friends at school in classes with you?

Yes ______
No ______

I.D. # ____________

13. About how much schooling do you think most young men need these days to get along well in the world?

Finish grade school ________
Some high school ________
Finish high school ________
Some college ________
Finish college ________
Other (business school, etc.) ________
Don't know ________

14. How much pressure would you say your mother puts on you to do well in your schoolwork?

A lot of pressure ________
Some pressure ________
Little pressure ________
No pressure ________

15. In general, whose approval means most to you? The approval of:

Mother ________
Father ________
Teacher you like most ________
Your best friend ________
Others (Who?) ____________
Specify:
____________
Don't know ________

16. In general, whose disapproval means most to you? The disapproval of:

Mother ________
Father ________
Teacher you like most ________
Others (Who?) ________
Specify:
____________
Don't know ________

17. Do you have any close friends at the other Transurbia public high school?

Yes ________
No ________

I.D. # ______________

18. How well would you say you behave at school, compared with the other students in the 11th grade?

Better than most ________
About average ________
Below average ________
Don't know ________

19. How popular would you say you are with the other students in the 11th grade?

More popular than most ________
About as popular as most ________
Less popular than most ________
Don't know ________

20. Compared with other students in the 11th grade, would you say that you go to parties and date more, about as much, or less than other students?

Date more ________
Date as much ________
Date less ________
Don't know ________

21. How well would you say you can read for someone your age?

Above average ________
About average ________
Below average ________
Don't know ________

22. How well would you say you can write compositions for someone your age?

Above average ________
About average ________
Below average ________
Don't know ________

23. How well would you say you can do math for someone your age?

Above average ________
About average ________
Below average ________
Don't know ________

I.D. # ____________

24. About how much schooling do you think most young women need these days to get along well in the world?

Finish grade school ________

Some high school ________

Finish high school ________

Some college ________

Finish college ________

Graduate school ________

Other (business school, etc.) ________

Don't know ________

25. How far do you think most of your close friends plan on going in school?

Finish high school ________

Some college ________

Finish college ________

Graduate school ________

Other (business school, etc.) ________
Specify: ______________

Don't know ________

26. How far do you think most of the other students in your English class plan on going in school?

Finish high school ________

Some college ________

Finish college ________

Graduate school ________

Other ________

Don't know ________

27. How far do you want to go in school?

Finish high school ________

Some college ________

Finish college ________

Graduate school ________

Other ________
Specify: ______________

Don't know ________

I.D. # ____________

| | |
|---|---|
| 28. How far do you really think you will go in school? | Finish high school ______ |
| | Some college ______ |
| | Finish college ______ |
| | Graduate school ______ |
| | Other ______<br>Specify: ____________ |
| | Don't know ______ |
| 29. Of all the people you know, who has influenced you most regarding your school plans? | Mother ______ |
| | Father ______ |
| | Other relative ______ |
| | School friends ______ |
| | Older friends ______ |
| | Teachers ______ |
| | Other (specify) ______ |
| | Don't know ______ |
| 30. How far do you think your mother wants you to go in school? | Finish high school ______ |
| | Some college ______ |
| | Finish college ______ |
| | Graduate school ______ |
| | Other (specify) ____________ |
| | Don't know ______ |
| 31. Would you say that you are a member of one of the leading crowds at this high school? | Yes ______ |
| | No ______ |

32. Where did you live before moving to Transurbia?

____________________ (town or city) ____________________ (state)

I.D. # ____________

Part III Please answer the following questions as completely as you can.

1. What are the names of your three closest friends at the high school?

2. In which clubs or activities in or out of school do you take part?

| CLUB-ACTIVITY | OFFICES | |
|---|---|---|
| List: | Yes | No |
| ____________ | ____ | ____ |
| ____________ | ____ | ____ |
| ____________ | ____ | ____ |
| ____________ | ____ | ____ |
| ____________ | ____ | ____ |

3. Do you hold an office or any other position in any of these? (Check above list)

4. Do you have a part-time job, afternoons, evenings, or weekends?

Yes ________

No ________

5. IF YOU CHECKED YES to question number 4 above, please describe the kind of work you do and state how many hours a week you work.

Description: Hours: ____________ per week

6. What is the name of the student in the 11th grade here whom you admire the most?